



USDOT REPORTS ON THE UNITED LINKS FOR THE UNITED STATES INTERMODAL WORKSHOP

HELD IN NEW YORK CITY

In the foreground of this panoramic view of New York Harbor is the Red Hook Container Terminal, the Port's primary marine intermodal facility on the east side of the Hudson River.



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I. PREFACE

ExpressRail at Port Elizabeth is an on-dock intermodal facility geared specifically for rapid ocean container movements through the port.



**By Dane Ismart,
Federal Highway Administration**

On July 14 - 16, 1993, the United States Department of Transportation and The Port Authority of New York and New Jersey co-sponsored an Intermodal Workshop in New York City. This workshop was called "United Links for the United States." The USDOT was represented by the Federal Highway Administration, Federal Transit Administration, Federal Aviation Administration, Federal Railroad Administration, Maritime Administration and the Office of Intermodalism. Approximately 300 people attended from federal, state and local agencies from across the east coast. The private sector was also well represented from a freight and passenger perspective. The three day program included several speakers from the USDOT, State DOTs, MPOs, Transit Agencies, Private Sector, Universities and Environmental organizations. Featured speakers at the workshop were Mortimer Downey,

USDOT Deputy Secretary; and Michael Huerta, USDOT Associate Deputy Secretary and Director of The Office of Intermodalism. Other noted speakers were former Congressman Robert Roe (D-NJ); Thomas Downs, Commissioner, New Jersey DOT; John Egan, Commissioner, New York DOT; Lucius Riccio, Commissioner New York City DOT; and John Tripp, Counsel, Environmental Defense Fund.

The United Links For The United States workshop was the largest of several intermodal workshops sponsored by the Federal Highway Administration in 1993. The purpose of the workshops was to provide an overview of the latest thinking on intermodal planning and the latest information on the federal regulations. Moderators, coordinators and panelists were chosen for specific discussion groups according to their areas of expertise. The three-day session was an effort to shift from the ISTEA policy stage to the practical implementation of planning and man-

agement systems guidelines and integrating them into operations.

Emphasis was placed on identifying the opportunities and the possible pitfalls in applying the new guidelines during group discussions.

The workshop topics included:

- > **A panel on "How the Private Sector Views the Transportation System;"**
- > **Case studies in intermodal movement of freight and passengers;**
- > **Airport/seaport access;**
- > **Creation of unified transportation systems; and other regional mobility issues.**

Tours of major intermodal facilities in the New York and New Jersey area were also conducted to see and hear an operational point of view.

So why was this workshop necessary or unique in relation to other USDOT meetings? The answer is simple. This workshop was intended to allow USDOT not only to provide guidance, but more so to listen and discuss the many problems, issues and ideas which have resulted from the ISTEA planning and management system regulations which were intended to develop an efficient integrated transportation system. USDOT used the information to become more sensitive to state and local transportation providers and users in the public and private sector. Developing a transportation system that is customer oriented is our goal.

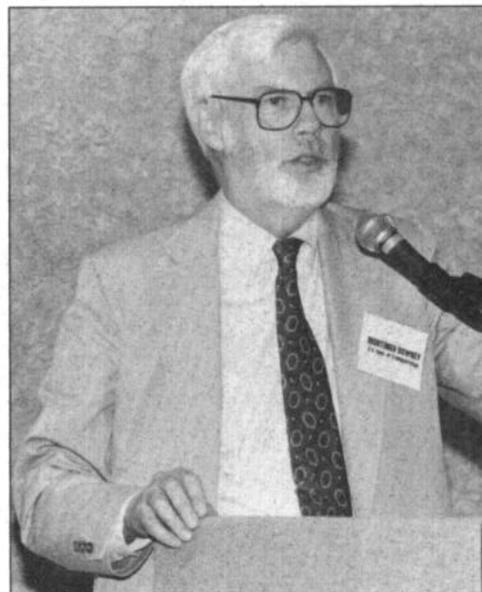
By listening to the exchange of information and assessing the comments from the attendees, everyone was able

to gain and make use of the lessons learned. Participants felt that the major outstanding issues which need to be addressed in developing intermodal plans/programs/projects were Institutional Capability, Customer Orientation, Transportation and Economic Development, Partnerships and Flexibility In Design concerns.

The conference findings contain an overview of the frank comments, issues, concerns, problems and ideas raised by the attendees of the workshop.

Special thanks to the FTA, FAA, FRA, Maritime, the Office of Intermodalism and FHWA representatives for providing a multimodal presence at the workshop.

And to all The Port Authority employees who labored tirelessly to develop the New York City program, despite the tragic disruptive event at their headquarters in the World Trade Center.



USDOT Deputy Secretary Mortimer Downey addresses the attendees during the opening session of the Intermodal Workshop in New York City.

II. CONFERENCE SUMMARY

The Port Authority of New York & New Jersey develops, maintains and operates some of the region's most vital intermodal transportation facilities.



**By Richard T. Roberts,
Port Authority of NY & NJ**

The "United Links for The United States" Intermodal Workshop was a forum for learning about intermodal practices and implementation of the ISTEA planning and management systems which address intermodalism.

Just about every transportation professional and more so, every region has their spin or interpretation of intermodalism.

The purpose of the Northeastern Workshop was to recognize and build upon the belief that intermodalism is a very broad concept and should remain so. This is necessary in order to give each region in the nation an opportunity to mold a transportation system that addresses their mobility, economic development and air quality needs.

Although "best practice" ideas on intermodalism were raised throughout the three day event. The results of the program suggest that we still have a long way to go before everyone has a clear understanding of how to take the first step in (1) developing and/or implementing the Intermodal Management System (IMS) and (2) understanding the ISTEA metropolitan planning process.

Private sector issues were also very much a part of the program. As transportation professionals, we must recognize that in today's global economy, economic development and competitive concerns are closely linked to the nation's transportation system. In developing the New York City program we wanted to ensure that private sector interests were addressed, noting the New York/New Jersey

region's position as an international gateway for commerce and people.

As the host of the Northeastern Intermodal Workshop, the Port Authority was particularly sensitive to interstate, multimodal and air quality issues, recognizing that we, as a bi-state multimodal agency, operate in a non-attainment area for ozone and carbon monoxide.

Briefly, the resulting issues from the workshop included the following:

- > **Customers — a need for customer orientation. Identify the customers and define their benefits in the context of regional goals.**
- > **Partnerships — you cannot force partnerships; seek to facilitate rather than control. Remember that mutual benefits are interwoven with mutual risks.**

- > **Economic Development — recognize transportation's relation to economic development.**
- > **Action Agenda — we need to move our studies and plans into the project phase in order to gain our customers' respect and address their needs.**
- > **Funding — without a reliable source of financial support, it will be very difficult to maintain our nation's transportation infrastructure investment and remain competitive in the global marketplace.**

A more detailed summary of the conference findings follows in this report. Additionally, the many reports and presentations, included in the proceedings will provide you with specific comments and concerns regarding the major issues. On behalf of The Port Authority of New York and New Jersey — thank you for attending and sharing your thoughts.



Approximately 300 people attended the workshop, representing freight and passenger organizations from the public and private sectors.

III. CONFERENCE FINDINGS

By Michael Meyer, Ph.D, Georgia Institute of Technology

Following are the resulting primary issues raised at the workshop from the speakers, panelists and breakout sessions.

Customer Orientation

A key theme of the workshop was the development of a "transportation system that is customer oriented." To do so first requires one to identify the customers of the transportation system, that is, the users of the system for both freight and passenger mobility. It is also necessary to define customer benefits in the context of regional goals. For example, how can improvements in the passenger and freight mobility system help achieve regional air quality goals? Or, how can such improvements relate to enhancing regional competitiveness? Important in answering these types of questions is to view passenger and freight transportation from a total trip perspective. This means that not only is the line haul portion of a trip important, but so are the interconnections that occur throughout the trip from origin to destination.

When adopting a customer orientation, issues of concern include:

- > **How can decisions be made in a timely way to keep the customers interested in the planning process?**
- > **What are the funding sources for intermodal projects?**

- > **How can we provide recognition to the customers for participating in the planning process?**
- > **How can we measure the performance of the transportation system that reflects customer concerns?**

This latter issue was considered a timely one in that the ISTEA required management systems that are based on performance measures. Workshop participants highlighted several measures that would be useful in the Intermodal Management System (IMS) and in gaining customer satisfaction. These measures included (in order of priority) reliability, costs, congestion reduction and safety.

The process of developing a customer oriented transportation system must also address community acceptance.

Projects aimed at improved system efficiencies and enhanced economic productivity (e.g., exclusive truck lanes) could also be viewed as being intrusive by communities and neighborhoods. The "customer" of the transportation planning process thus also includes the general public.

Workshop participants suggested that there was little difficulty in developing plans. The real challenge lies in implementing the plans, especially those projects that tend to be large and intrusive. We need to focus more on how the facility will be marketed, operated and what will be the ultimate use of the facility. In short, we

need to communicate with the customer of our transportation systems (freight and transit) and understand their needs before we begin drafting plans.

Partnerships

A clear understanding of mutual benefits and risks is needed to develop partnerships. There was some concern and confusion as to the meaning of partnerships. In the context of intermodal planning, partnerships were not intended to be interpreted in the legal/contractual sense. Rather, partnerships are a way for parties to come together to discuss, plan and make informed decisions on what is needed to benefit the customer/user. Several participants noted that it is easier to form partnerships when you have a stable regional funding source that can be used to develop intermodal projects.

Key reasons to forge partnerships include:

- > **provides those impacted by the decision making process “an opportunity to be heard and to influence” the direction of regional transportation investments and decisions;**
- > **creates a “win-win” situation because in a partnership you settle differences and agree on a given plan before it is submitted to the MPO TIP process; and**
- > **allows different objectives to be incorporated into the planning process. This is especially important when addressing private sector needs.**

During the outreach effort, in developing partnerships, we must understand that it is important to facilitate, and not try to control the process — we cannot force partnerships. An unwilling partner is unlikely to provide the necessary support and commitment.

Finally it was also stressed that it is critical to include operating agencies in the decision making process. Noting that it will be the modal operators (i.e., transit, ports, airports, rail, intermodal facilities) who will inevitably be impacted by most transportation investment decisions, workshop participants felt that these agencies need to have a voice in these decisions.

Transportation Investment and Economic Development

The relationship between transportation investment and economic development was a dominant theme in the breakout sessions from both a freight and passenger perspective. As highlighted in the ISTEA, “the National Intermodal Transportation System shall consist of all forms of transportation systems in a unified, interconnected manner while promoting economic development and supporting the nation’s pre-eminent position in international commerce.” When addressing regional objectives from an intermodal perspective, passenger and freight flows were viewed as economic arteries. Many of the workshop attendees were from cities which include ports and thus serve as international gateways. Intermodal transportation investment thus has a critical role in international trade and

commerce. It was also recognized that transportation investment would be used as a means of achieving multiple objectives, including meeting CAAA requirements, addressing ADA requirements and managing congestion.

Linking land use to intermodal transportation planning must be recog-



New York State DOT Commissioner John Egan (L), Port Authority of NY&NJ Executive Director Stanley Brezenoff (C) and New Jersey DOT Commissioner Thomas Downs (R), provided participants with an overview of the New York/New Jersey region's intermodal network.

nized as a key factor in advancing economic development. There are complementary land use activities that enhance transportation facilities and could further the economic impact of transportation facilities by improving the competitiveness of the region.

Competitiveness as an economic development issue was mentioned in virtually every breakout session, particularly in the context of interregional competition. We need to assess what our intermodal needs are in order to compete with other regions in the nation. Noting that we now live and operate in a global economy, it is important to understand how

improvements to transportation links will impact areas beyond the international gateways.

It was also agreed that a regional funding source for regional intermodal projects was needed. Some type of priority setting for intermodal projects should also be established in the existing TIP process.

In the context of better linking transportation investment and economic development, it is important to include private sector interests in planning and decision making. Developing a customer-oriented transportation system requires us to be good listeners and more importantly be "doers" — that follow-up our plans with action in addressing private sector linkage concerns. This is critical for goods movement.

Given the market orientation of passenger and freight transportation, our planning must recognize the changing context of demographics and economics. We must recognize how the market will change in the future in order to anticipate what we need to do now in infrastructure investment. This will allow us more time to get intermodal projects in place to address future needs.

Institutional Capability

Integrating the many new transportation requirements into the existing planning process will be a very complex exercise, especially in older metropolitan areas with air quality concerns. Recognizing the time lines required for implementing the Intermodal Management System (IMS) and the many factors which MPOs must consider in the planning process, there is a need to put in place an institution-

al capability to develop and implement intermodal projects. In short, there is a need to have an institutional mechanism which can make decisions on intermodal projects and is capable of linking economic development issues to transportation at a regional level. Participants believed that intermodal facilities (i.e., terminals, interchanges, etc.) were often viewed as "coincidences" rather than as planned opportunities to link our mature modal systems, or as a method to enhance economic development opportunities. This is largely due to the fact that we are institutionally structured at the local and federal levels along very diverse and independent modal lines.

"Be wary of solutions seeking problems" was an issue which was raised by participants. Planners must first listen to the customer/user and learn what their needs or problems are before developing solutions. It was noted that many times we approach transportation from the other direction (i.e., acquiring a technology before finding a use or urgency for its implementation).

Coordinating system operations was also an institutional intermodal issue. In order to maximize mobility, integrated fare cards and scheduling would promote a more user friendly transportation system.

For freight, there was a strong consensus that private sector groups must be invited to the table in order to assess what their needs are and to provide a more open public involvement process. Hopefully this would provide the public and private sectors a forum to "figure each other out."

Flexibility in Design

As transportation facilities are being built or reconstructed, flexibility for "future enhancements" should be incorporated into the facility design. Technological innovation plays an important role in this flexibility. For example, project design can be flexible enough to anticipate technological changes (e.g., double and triple stack container movements). In addition, technology can be used as part of the solution, (e.g., IVHS technologies that will enhance facility operation). Such flexibility also suggests that operational improvements should be considered on equal footing with capacity expansion.

Transition Phase

From an institutional and funding perspective, we are experiencing a transition phase in transportation as a result of the many mandates required from ISTEA. "Participant expectations" of the many requirements is still evolving. A few critical questions which must be answered in regards to who actually will be involved in the decision making, particularly given the enhanced role of the MPO process, include: Will major modal operators have a true voice in the MPO process? How will the private sector be brought into the process?

The metropolitan planning process is complex, due to the many requirements that must be linked to transportation projects in urban areas (i.e., CAAA, ADA and environmental permitting). The planning community and the private sector are still trying

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TRANSCOM, a coalition of New York, New Jersey and Connecticut transportation agencies, is a key source of information on daily regional traffic movements and incidents.

The next questions then become:

- **What type of information do we need for site specific decisions or for a system monitoring?**
- **What type of data do we need to define the performance measures?**
- **What type of data collection strategies do we need to collect the data?**

The development of the IMS should be based on first knowing the needs of the customer and the region. Many states and regions have reinvented the wheel by starting their IMS initiatives by collecting and developing data that may or may not be used to address their regional goals. The purpose of the flexibility in the federal guidelines is to allow the regions to use what data they may already have to address their individual needs. The guidelines never intended the states to start from scratch on their IMS efforts.

Conclusion

By the very definition of "intermodal," and given our historical modally-oriented institutional structure, project implementation is very complex, resource intensive and time consuming.

ISTEA provides an opportunity for dealing with intermodal projects, funding resources and timeframes.

However, we still have a long way to go, especially in:

- **understanding institutional capability at the regional level;**
- **realizing the impacts of funding limits and shortfalls;**
- **dealing with project pipeline backlogs which are due in part to the large number of projects at the MPO level with protective constituencies; and**
- **providing education on what ISTEA means to the customer.**

IV. INTERMODAL FEDERAL POLICY

Office of Intermodalism

Nancy Harris, Office of Intermodalism, characterized ISTEA's impact as "intermodalism, the new



The Port Authority Bus Terminal, the world's busiest commuter bus terminal, serves over 54 million passengers annually.

transportation revolution." She noted that with the completion of the nation's transportation systems, which were developed in isolation and in competition with each other, we now have to refocus on the integration of the existing systems, for maximum efficiency. Intermodalism includes all assets, modes and the information which travels through the systems. Further, it recognizes new technology and the role it plays in influencing and modifying our transportation capability nationwide. Good transportation requires efficient connections between modes and advocates making better transportation planning decisions while considering a full range of alternatives. This could assure that safety

and environmental benefits are integral to the final product. An intermodal approach to transportation planning focuses on maximizing mobility. This takes into account all modes used during a total trip to deliver either people or goods.

Federal Transit Administration

Robert Owens, FTA, stated that ISTEA facilitated an enhanced working relationship between the modal administrations in the USDOT. As an example, he noted the current cooperative efforts in defining the planning and management regulations with other USDOT administrations, in particular FHWA. Additionally, FTA has funded intermodal facilities with other modal administrations and in partnerships with the private sector who have been active in developing intermodal terminals. Mr. Owens highlighted the development of a large St. Louis intermodal facility which includes rail, bus, bicycle, pedestrian, heliport and taxicab. Due to the fact that federal transportation funding belongs to all taxpayers, dollars should be targeted to those projects which benefit the greatest number of people throughout the country. Listening to customers and knowing their needs and concerns is the way to achieve this goal.

Federal Railroad Administration

FRA representative Rob Martin also indicated that FRA has initiated more contact with other USDOT modal administrations as a result of the ISTEA's

framework. He added that the railroad industry is probably "one of the only modes with excess capacity. You can get a lot more transportation out of it." Listening to the customer is also very much in line with FRA thinking — FRA has developed courses in how to work more cooperatively with the railroads. Mr. Martin also indicated that the railroads should not focus too heavily on federal funding simply because there is not very much in the pot.

Federal Aviation Administration

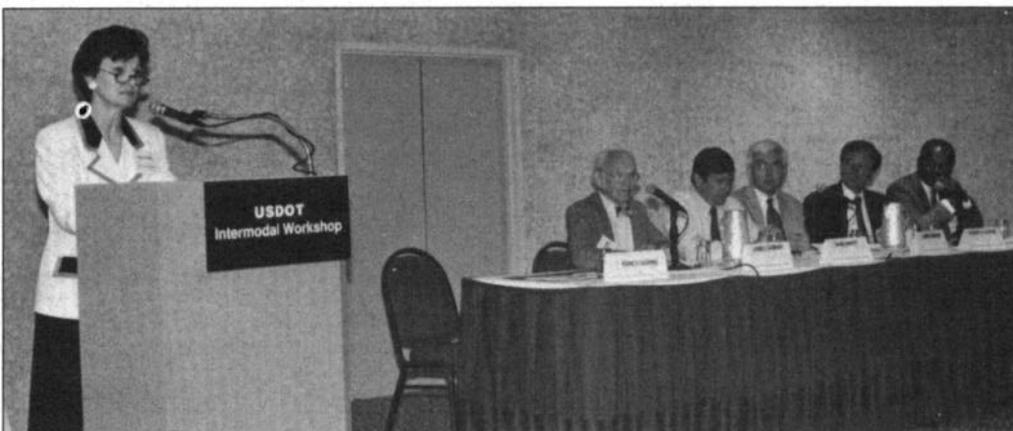
FAA highlighted linkage issues associated to access. Airport/seaport access are key intermodal concerns for both operators and planning agencies and they are focal points in the ISTEA Declaration of Policy and in the planning guidelines. **Larry Kiernan, FAA** pointed out that unfortunately ground access is a poorly developed sector of transportation engineering. Mr. Kiernan stressed that FAA is now looking more broadly into the movement of people and goods, not just aircraft. In a cooperative project with FHWA, FAA is developing a planning guide for access to airports.

Maritime Administration

James Carman, MARAD stated that various studies on landside access for ports are also being conducted cooperatively with other USDOT modal administrations. Mr. Carman noted that Ports are real intermodal components of the transportation system and that dredging concerns must be addressed along with landside access needs in order to maintain a port's competitiveness.

Federal Highway Administration

FHWA is the USDOT modal administration which sponsored the intermodal workshops. They are also drafting, in cooperation with FTA, the bulk of the ISTEA regulations in particular the management and planning guidelines. **FHWA representative, Dane Ismart**, provided the audience with a comprehensive briefing of the ISTEA guidelines. Please refer to Section VIII for FHWA's briefing on the Intermodal Management System (IMS) technical guidelines.



The USDOT was represented by a multimodal presence. Addressing the participants were Nancy Harris, Office of Intermodalism; Capt. James Carman, Maritime Administration; Dane Ismart, FHWA; Larry Kiernan, FAA; Rob Martin, FRA; and Robert Owens, FTA.

V. INTERMODAL CASE STUDIES/ DISCUSSION GROUP REPORTS

Two case studies were used as the mechanisms to highlight key intermodal issues. The "Circumferential Commercial Corridor" (CCC) focused on freight mobility and the "Access to the Core" case study highlighted passenger movement. Although both case studies highlighted multimodal interstate linkage concerns in the New York/New Jersey metropolitan area, they raised various issues which could be applied to most urban centers in the nation. Each case study session was followed by four breakout groups which highlighted particular issues sensitive to the development and implementation of intermodal programs and projects. Below are descriptions of both case studies (including mapping), followed by the discussion group reports.

A. Freight Intermodal Case Study "Circumferential Commercial Corridor" (CCC)

The Circumferential Commercial Corridor would significantly improve the economic viability and global competitiveness of the NY/NJ region and its population of more than 16 million people. Working closely with the States of New York and New Jersey, The Port Authority of NY & NJ has developed an intermodal strategy to address regional connectivity, reliability and flexibility. The NY/NJ CCC concept was developed to address these regional problems and provide for intermodal accessibility and continued economic expansion within seaport, aviation and rail freight industries.

An Immediate Implementation Plan has been developed to identify those near-term intermodal projects which should receive the highest priority, and could be implemented immediately in a phased approach, with needed flexibility to adapt to changing regional priorities. These projects are components of a larger, more comprehensive goods movement program. Elements of the longer-term program will require further examination to determine their effectiveness, and may change in response to emerging new market needs. Recognizing regional economic realities, projects listed on the Immediate Implementation Plan should receive first priority (subject to funding availability), followed by more comprehensive, long-range, intermodal programs.

Intermodal Economic Activities

The New York metropolitan region historically has been one of the world's great port cities, and has prospered with world trade and associated import/export activities. Statistics from the late 1980's indicated that 15 percent of total U.S. merchandise trade passed through the NY/NJ customs district, almost 55 million tons. Looking at U.S. imports alone, the proportion rises to 55 percent.

The movement of freight into and through the New York metropolitan region is a complex operation, accounting for more than 700 million

tons of freight per year. Approximately 90 percent of this tonnage moves by truck. The NY/NJ region, with its large population and manufacturing base, is significantly more dependent than most other regions on trucking as a goods movement mode.

As traffic volumes increase within a network and usable capacity becomes more scarce, minor incidents and congestion-related delays severely reduce service and route reliability. Recent dependence in manufacturing and the economy as a whole on "just in time"



The Port of New York-New Jersey handled 12.8 million long tons of oceanborne cargo in 1992.

Reliability, Connectivity and Flexibility

Three major prerequisites for regional intermodal mobility are:

- > Reliability (relative to congestion);**
- > Connectivity (linkages to regional intermodal facilities); and**
- > Flexibility (serving several commercial modes).**

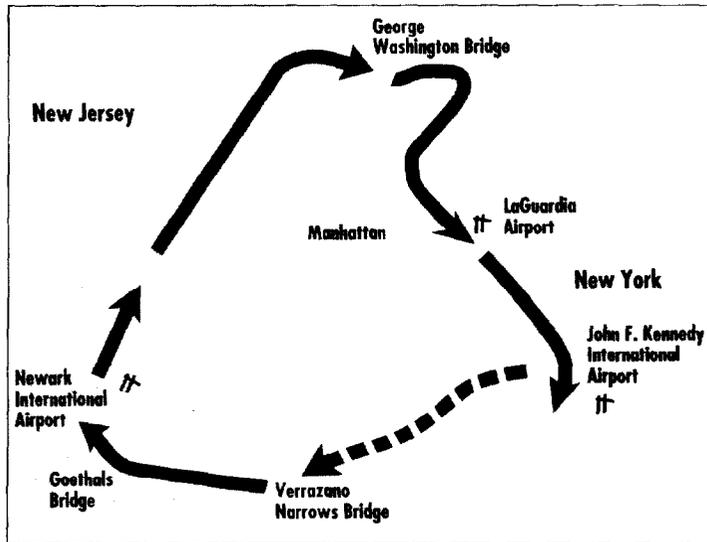
All three concerns are addressed through the Circumferential Commercial Corridor.

deliveries as a means to minimize inventories and increase goods movement efficiencies has increased the importance of reliability for a successful regional business climate.

Major intermodal facilities within the NY/NJ metropolitan region include five major marine terminal facilities, three major international airports, and more independent rail intermodal facilities than any other East Coast port.

Efficient intermodal linkages among these and other regional facilities are critical to the continued economic

growth and development of the NY/NJ region. Development of the CCC would provide the needed connectivity and intermodal linkages to maintain and expand regional intermodal facilities and support the competitiveness



The New York/New Jersey Circumferential Commercial Corridor.

of the NY/NJ region as a leader in national and international trade.

The CCC would serve the changing needs of the goods movement industry and also provide the flexibility needed to evaluate the effectiveness of rail, truck, barge, or a combination of these modes. Facilitating goods movement through a commercial corridor also would achieve a better balance between truck and rail, necessary to deal effectively with clean air, vehicle efficiency, fuel consumption, transportation costs, and related regional issues.

The goods movement industry generates millions of dollars in related services and support businesses, millions

of dollars in sales and income taxes and thousands of jobs. More than 420,000 jobs are directly associated with the port and aviation industries in the NY/NJ region. When considering indirect or secondary employment effects, employment opportunities involved in servicing or support of port and aviation activities are multiplied several times.

Refer to the CCC map for highlights of the freight intermodal case study.

Freight Intermodal Breakout Session Reports

The intermodal freight case study (CCC) was used as the starting point for discussing four major issues which are necessary in developing and implementing intermodal freight programs and projects.

These issues are:

- **Partnerships;**
- **Planning and Intermodal Management System;**
- **Funding; and**
- **Competitive Issues.**

Breakout Session 1, Partnerships:

The term partnership described working relationships, long term commitment and sharing of risks and benefits. Implementation of the CCC, as with other regional intermodal projects, would require cooperation and coordination between the region's transportation agencies and the private sector. Participants of the partnership breakout session outlined a number of concerns and ideas. General

comments from this session indicated that partnerships were a mechanism for the private sector to get their concerns heard by government agencies and a way for the public sector to get the private sector to buy-in to their projects and agenda.

Still there was no sense of how to forge or encourage these relationships. For example, how would public agencies bring in private sector interests in trying to define the freight component of the Intermodal Management System? The private sector holds valuable and necessary data information which could assist the States and MPOs in developing systems which would address linkage and efficiency measures unique to their particular regions.

The heart of the problem is overcoming the barriers between the public and private sectors. Chris Ward, New

York City Economic Development Commission, noted "that it is not the role of government to tell the private sector how to do business." Good partnership examples have been "win-win," even though the parties involved may have different objectives. There is still a sense of private sector skepticism, because everyone has their own agenda and their own point of view. Jack Barthwell, Conrail, stated that "a clearance project in Pennsylvania worked out because everyone received benefits. Other times, things don't work out because government doesn't understand how business works."

It was recognized that the private sector will oppose public policy that negatively affects their business and will participate only if they will get some return on any investment they might make. Ellis Vieser, New Jersey Alliance for Action,



Federal and local intermodal perspectives were provided by USDOT and Port Authority representatives, Nancy Harris, USDOT Office of Intermodalism; Anthony Shorris, Deputy Executive Director, Port Authority of NY&NJ; Michael Huerta, USDOT Associate Deputy Secretary of Transportation; and Richard Roberts, Chief of Transportation Planning and Policy, Interstate Transportation, Port Authority of NY&NJ.

indicated that "Planners do a great job of deliberating, but can not get past the issue of who is going to do what." Nevertheless, despite the difficulties in developing these partnerships, the private sector wants and needs to be involved. There is the need to build consensus and get the roles to be complimentary instead of being adversarial.

It was noted that there are also other kinds of partnerships, (i.e., getting the general public to buy-into projects). Benefits of these types of partnerships could be critical to advancing commercial corridors, truck priority lanes, or electronic tolls. Stan Gee, FHWA mentioned that "FHWA wants to reach out to the private sector in order to understand their needs related to infrastructure." The public sector's goal should be to fundamentally change the way transportation planning is done, basically by making it more business-like.

Breakout Session 2, Planning and Intermodal Management System (IMS):

This session addressed the specific performance measures to gauge and plan for freight movement.

The participants highlighted the following in order of importance:

- > **Customer satisfaction;**
- > **Reliability;**
- > **Cost;**
- > **Congestion reduction; and**
- > **Safety.**

In order to break ground on developing units of measurement and even technology, Dane Ismart, FHWA, sug-

gested using IVHS. The technology and funding is now available. By using the available funding to develop IVHS applications either for planning or for implementation, the resulting IVHS activity could also provide information on reliability factors in goods movement. Managing demand was mentioned as a measure to reduce congestion and increase freight mobility.

Possible measures to do this included:

- > **Congestion pricing for the use of roads and bridges;**
- > **Intermodal management of freight; and**
- > **Off hours freight deliveries.**

Although the participants recognized that developing large scale projects which address linkage concerns may take at times 15-20 years, there was agreement that planning agencies should not use this as an excuse to avoid addressing a series of low cost projects which provide connectivity. Additionally, there was concern about the availability of data to make good decisions for long term solutions and short term capital improvements. This issue is very much in line with the general concerns in other regions of the nation, noting that the private sector holds much of the available data that could be helpful in developing the freight component of the IMS.

Finally, panelists voiced concerns about whether MPOs are presently organized and staffed to carry out the increased responsibilities placed on their shoulders (to carry out the planning and management system requirements). Noting that most participants

attending this workshop represented older urban regions with clean air concerns, their MPO responsibilities could be seen as disproportionate compared to other regions in the nation.

Breakout Session 3, Funding:

The shortfall of authorized ISTEA funding was echoed throughout the three-day workshop. This raised the issue that flexibility in transferring limited funds from one program to another has been minimal at best.

Given this scenario, participants focused on a few key funding issues for freight intermodal projects:

- **In a funding environment that often has more needs than funds, participants tackled the issue of what is the expectation of how successful intermodal projects will be in securing ISTEA funding?**
- **There was concern on the types of intermodal projects which would be expected to be funded in the TIP process.**
- **Establishing a funding priority for any type of transportation project requires the support of a constituency (freight does not vote). What constituency is there for intermodal projects and what is needed to be successful in furthering intermodal projects?**
- **What specific steps need to be taken to provide sufficient funding and/or funding eligibility for intermodal projects?**

In response to these issues, it was apparent to the participants that there appears to be more projects than available dollars. This is largely due to the diverse competing groups vying for limited funds. Although the ISTEA provided the criteria in both the metropolitan and statewide planning guidelines for considering transportation projects which address connectivity, most participants noted that the ISTEA expectations in actually developing intermodal freight plans and projects is unrealistic. FHWA representative Charles Nemmers noted that there are many other factors besides funding which impact project selection, such as permits and clean air requirements. He also noted that projects which connect ports, truck terminals and intermodal facilities have a better chance of receiving funding, due to the linkage factors listed for consideration in the MPO and statewide planning guidelines. Additionally National Highway System (NHS) funds also target projects which provide linkage to ports, seaports, international gateways and intermodal facilities. ISTEA has challenged us to be innovative, therefore, proposed projects should be creative in addressing linkage concerns. It was noted that rail freight projects cannot be funded under the ISTEA highway funding, but highway projects and highway to rail can be.

In the context of funding, public/private partnership concerns are still not fully understood or developed. Both interests need to work together to maximize mobility in any given area in order to minimize unnecessary competition with each other. As an example, Disney World was unsuccessful in

obtaining ISTEA funding to construct a \$20 million highway interchange to provide more efficient access to its facility. Therefore brokering projects which impact regional economic development is very much an issue which the private sector sees as a factor on whether they will get involved in the TIP process.

Anthony Riccio, Harlem River Yard Ventures, stressed the importance of having private sector interests represented during the TIP selection process. The dilemma becomes that the private sector often does not know how to become involved in the MPO process and finds it difficult to tap into funding despite the ISTEA public/private partnership provisions. So what you are left with is a situation where government speaks to government and the private sector's interests are left out of the TIP. In order to help address this concern, Richard Malchow, New York DOT, stated that there is a need to include private sector representatives in their meetings.

Breakout Session 4, Competitive Issues:

A key theme in the country's transportation policy is that the National Intermodal Transportation System shall provide the foundation for the nation to compete in the global economy. Participants of this breakout group were focused on productivity, partnerships, technology and freight interests in the MPO process. It was agreed that productivity is the key to assess demand, by public sector investment or as a factor by the private sector to determine participation

in public/private partnerships. Private sector participants stated that partnerships will be formed only if there is productivity to be gained.

No one cares how the freight arrives or who participated because the private sector is more focused on:

- > **An efficient and flexible transportation system;**
- > **Thinking globally; and**
- > **Getting the freight to the market.**

There was a question as to whether partnerships would even work because of the large number of predators in the marketplace looking for the greatest opportunity to take advantage of its efficiency in moving freight.

Private sector participants also noted that government must look at its role as a service provider to the private sector. In order to allow carriers and shippers to become more competitive in mature metropolitan areas, there must be a blending of the modes including more rail elements into intermodal terminals, ports, airports, truck terminals and international gateways. This would maximize mobility options in dense urban centers while addressing congestion and air quality concerns.

Public sector representatives questioned whether they had enough information to identify the performance measures unique to their regions. They noted that the private sector holds much of the freight data information necessary to develop the freight component of the Intermodal Management System (IMS). Additionally, public sector representatives indicated that simply building and devel-

oping intermodal facilities (including approaches) will not guarantee private sector use of the facility. You cannot assume that if you "build it and they will come." In a partnership, the public and the private sectors will only share the benefits if they also share the risks and commitment. There must be a return on any investment, whether it comes from the private sector or the public sector.

The MPO process was viewed as difficult to understand and/or cumbersome by the participants, in particular for the private sector attendees. General comments indicated that the process had to be more user friendly and that MPOs should think much more broadly and globally in order to understand the private sector's sensitivity to time and efficiency. MPOs were thought of being too local minded to properly consider long distance (out of region) benefits. Most participants agreed that in older metropolitan areas with air quality concerns, like many east coast port cities, regions are complicated by their size and responsibilities. This situation places an even heavier burden on the MPOs as they facilitate the TIP process, noting the many factors which must be considered as they review proposed projects for funding.

As an efficiency measure, it was agreed that introduction of intermodal technology was needed (EDI, terminal handling technology, high speed barge, roadtrailer, bogie technology) in order to truly assist regions in maximizing "just in time" delivery and door to door services. Again, this was an especially sensitive area for eastern port cities and for the air cargo indus-

try, who pointed out that major costs are landside. This is largely due to antiquated infrastructure, where many of the interstates are the grandfathered highways which cannot safely handle the longer and wider trailers used in other parts of the country.

B. Passenger Intermodal Case Study "Access To The Core"

Background

In 1989, the Metropolitan Transportation Authority (MTA) in collaboration with the Port Authority (PA), examined the feasibility of extending the Flushing Line (#7) to the Meadowlands in New Jersey. Working with the New York City Transit Authority, the MTA and PA took a broad look at the merits of creating a new transit rail service westward into New Jersey as a way to ease the trans-Hudson commuting squeeze and bring real benefits to New York and New Jersey. The findings suggested that such a new service would address an important mobility market need and would provide some significant environmental and economic benefits to the region by pointedly strengthening access to Manhattan's Core.

The extension may represent a dramatic remedy for Midtown. It offers expanded trans-Hudson capacity cross-town on a non-polluting electric rail mode, an important consideration in light of the Clean Air legislation, while providing transit access to the developing waterfronts in both states. Rerouting of some existing commuter bus routes to New Jersey stations on a new line could free up capacity on I-495 and

the Lincoln Tunnel which could then be used for priority freight routing.

This report was well received and provided the catalyst for additional work on identifying a trans-Hudson Midtown crossing. The Flushing line was

Midtown transit distribution system and a new rapid transit line.

In September 1990, the six major transportation agencies in New York and New Jersey reviewed all known long-range transportation initiatives



Grand Central Terminal, a major passenger intermodal hub, serves NYC subway and suburban commuter rail.

one of a number of possible options for improving access from New Jersey to Midtown. Other alternatives subsequently examined included: increased train handling capacity at Penn Station, NY, by New Jersey Transit (NJT) and other west of the Hudson commuter services; a new commuter rail tunnel from New Jersey into Grand Central Terminal; a combination of bus and ferry services with a new

affecting overall regional mobility, with specific emphasis on enhancing movement to and through the Midtown Manhattan Business District. Based on this work, the MTA and the PA proposed that the core access issue be advanced.

In October of 1990, the six regional transportation agencies officially adopted core access as one of the most critical transportation issues facing the

region. Subsequently, the "Future Access to the Region's Core" study group was formed. The study group's plan was to define a long-term infrastructure development strategy integrating the region's non-contiguous transportation network into a cohesive, environmentally sound system. The underlying theme of this plan was to maximize regional mobility per dollar invested in new infrastructure. The study would recommend one or more long term transportation policy initiatives aimed at advancing regional connectivity and seamless growth between and through the core and its adjoining suburbs.

Benefits attributed to the core access alternatives during the study included a faster, more direct service into Midtown and Queens, diversion of several thousand riders from automobiles, improved air quality, improved access to the economic core, reduced pressures on Penn Station and more expeditious movement of goods into New York City.

Current Study

More recent economic, population and traffic forecasts performed by the PA and others continued to show future trans-Hudson traffic growth to jobs in Midtown Manhattan. Existing interstate public transportation facilities in the Midtown Corridor, such as the Port Authority Bus Terminal and Penn Station, Manhattan are approaching capacity. With additional vehicular capacity in this corridor impractical, new long term rail capacity may well be needed.

It should also be noted that the Manhattan Core has expanded along an East-West axis from Queens across the West Side of Manhattan to the New Jer-

sey Waterfront and the Hackensack Meadowlands. It is becoming increasingly important to the region's economy to interconnect the many transit facilities within this new nucleus of growing economic activity.

The Port Authority's recent interstate network analyses identified a new fixed rail facility as the most promising long term initiative for the Midtown Corridor. It was particularly effective in attracting trans-Hudson auto commuters from their vehicles, thus addressing future vehicular growth at both the George Washington Bridge and the Lincoln Tunnel.

The overall scope of work for the Core Access Study is now being formulated by MTA, NJT and PA planners. It is likely to include a complete market study, a determination of the feasibility and cost of the various alternatives, and plans for financing and operating the preferred alternative.

Description of Alternatives

For the intent of improving east-west access to the Midtown Manhattan core, four broad categories of rail alternatives will be among those recommended for future detailed study. In addition to a "No Build and a No New Rail Tunnel" (Bus/Ferry alternative), the rail alternatives will be selected from three generic categories: conventional rapid transit, suburban rapid transit and two general configurations for commuter rail.

Conventional Rapid Transit

The primary rapid transit alternative is a Trans-Hudson extension of the exist-

ing New York City Transit Authority No. 7 Flushing Line. As previously described, the extension of the Flushing Line could make use, in Manhattan, of the existing cross-town subway, together with its three existing stations. The extension of this line to the west would include a new station on 12th Avenue, providing transit service to the west side of Manhattan. This extension would expand the interconnectivity of the transit network since the Flushing line accesses Metro-North at Grand Central Station, the Long Island Railroad at Woodside in Queens, New York and New Jersey Transit at the proposed Secaucus Transfer Station. In New Jersey it could include stations on the Waterfront, near the New Jersey Turnpike and at a new rail station near the sports complex.

Suburban Rapid Transit

This alternative might cross Manhattan on 49th Street. It was selected for further study since it would be independently operated and free from the constraint of the existing transit and commuter rail system, allowing use of larger cars and the latest technology. The New Jersey alignment would be similar to the Flushing Line extension. The 63rd Street tunnel would be considered for connecting the new line to Queens.

Commuter Rail

This alternative could include a trans-Hudson crossing to upper Manhattan, providing direct passenger access from Bergen and Rockland Counties to Grand Central Terminal. The New

Jersey portion of this option might cross the Hudson River near 92nd Street. At Ridgefield Park, New Jersey, the line could merge into the existing system at a new at-grade station before continuing north and west. A connection to the Northeast Corridor would be examined.

Another commuter rail option might involve running Long Island Railroad and NJT commuter trains across Manhattan from Sunnyside in Queens to the Meadowlands in New Jersey. Trains could stop at up to four stations in Manhattan. Alignments would be investigated between 50th and 33rd Streets with one variation being the expansion of Penn Station. This broad category of alternatives would be most similar to regional rail developments in Europe.

Freight Capability

All alternatives would be investigated for freight carrying capability.

Intermodal Aspects

From the passenger viewpoint, a new transit link could provide a much higher degree of intermodal connectivity for passengers. Specifically, it could more fully integrate commuter rail service in New Jersey and Long Island with the existing subway system and all connecting bus services. For the commuter rail choice, in particular, off peak rail freight access to Long Island is a distinct possibility. Where feasible, alternatives also might be linked to airport access services proposed near Sunnyside in Queens.

Refer to the "Access to the Core" map for an overview of the passenger case study.

Passenger Intermodal Breakout Session Reports

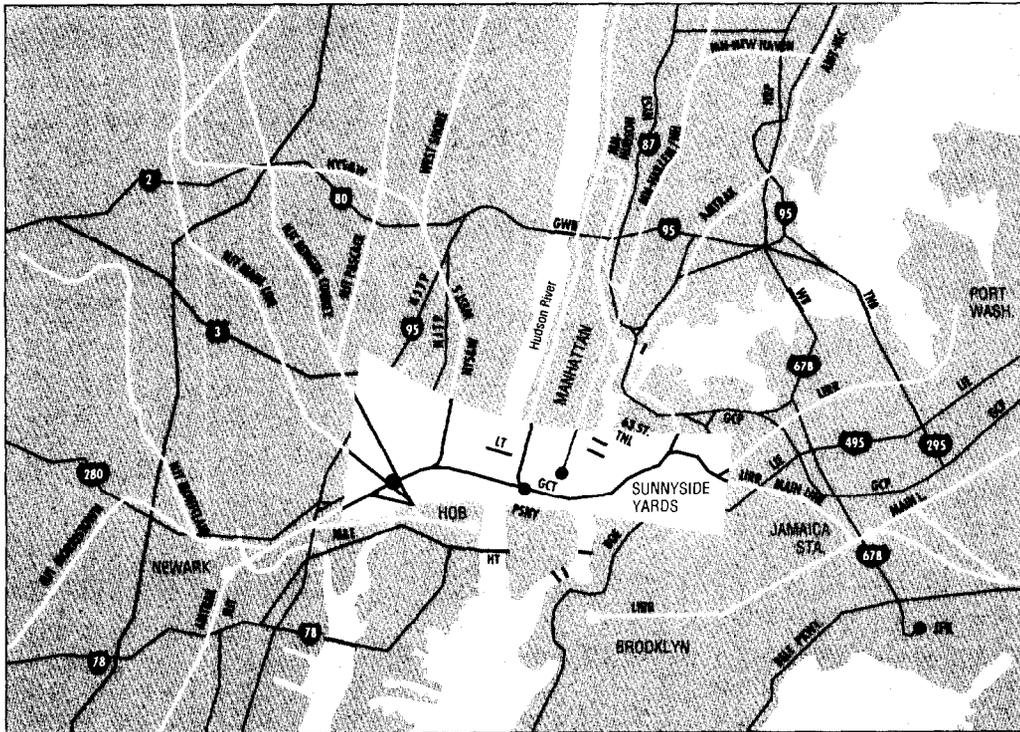
Following are the passenger case study reports resulting from the four breakout sessions. As in the freight case study, the passenger case study - Access to the Core, was used as the mechanism to discuss major issues which impact the development and implementation of intermodal programs and projects.

The breakout sessions were divided into four major issues:

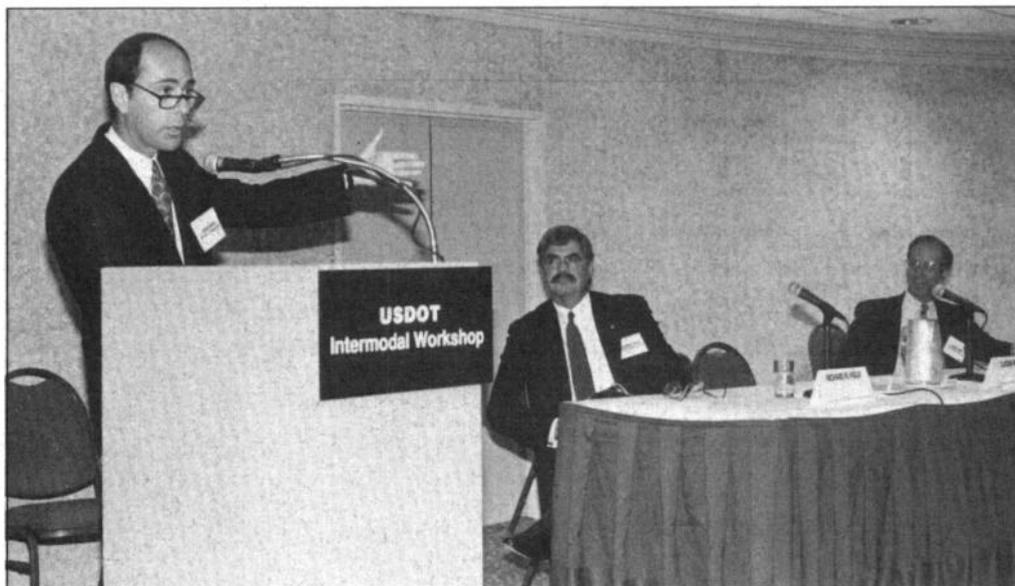
- **Making Intermodalism Work;**
- **Maintaining Economic Development;**
- **Metropolitan Planning and Management Systems; and**
- **Partnerships and Intermodal Implementation**

Breakout Session 1, Making Intermodalism Work:

The ISTEA and the Clean Air Act promote intermodal service, flexible funding, multimodal participation in decision making, and increased public participation during planning. Yet we can see from the last two decades, forces seem to be somewhat aligned against us. There have been radical shifts in travel behavior, both by households and firms. Minimizing transportation costs is a key concern. Our planning agencies have become fragmented — the tri-state area (Connecticut, New York, New Jersey) is now three uni states. New York's MTA still has political difficulty dividing the capital pie among its operating units. CAAA and the environmental issues bring pressures unforeseen a decade



Access to the Core map.



Lucius Riccio (L), Commissioner, New York City DOT briefed the participants on New York City's linkage issues and concerns. Richard Kelly (C), Port Authority of NY&NJ; and James Tripp, Environmental Defense Fund also highlighted regional mobility needs and their relation to environmental concerns.

ago (or just ignored), and our roadways which never could meet their demands must respond to the mandates of CAAA.

Yet our core, which has a daytime population greater than most of the world's cities, still works, and it works, not because of telephones or computers, but because of well planned and well run, though a little aging, public transit system.

There are a number of projects, planned and programmed which are "ready to go" to provide improvements in the system. The session examined highway/roadway improvements and their impact to transit.

We asked, during this session, do these projects make sense for the changing regional demographics and economics? How can we evaluate these projects against the mandates of ISTEA? First let's think about regional

mobility and how we measure it — VMT, minutes/trip, hours of delay, trips foregone, trips induced and how to improve it. Will these projects improve mobility? Are all the segments the same? Will the projects improve regional welfare through an increase in the gross regional product? Will they make the core more attractive? To achieve optimum results from our investments, are the projects grouped correctly, and are they implemented and operated by the logical organizational structure. Are investment funds lost due to competitive regional planning, decision making and implementation?

Major Discussion Issues And Concerns

- **Understanding demographic and economic shifts/trends will help guide future transportation (including intermodal) invest-**

- ment. Example: if the New York/New Jersey region's core will diminish in importance, how can investments be adapted to suburban travel priorities as well as the core?
- As transportation practitioners, we must understand the customer and make customer based decisions to make travel easier. Intermodalism is an important factor in satisfying user demands because it reduces or eliminates travel barriers and makes the system user friendly.
 - Decentralized (local) land use decision making creates uncertainty for centralized (regional) transportation investment. Will a fixed route transit investment attract higher density to justify the investment or will development be restrained artificially by municipal caprice?
 - Intermodalism encourages new partners because it requires crossing institutional boundaries, modal delineations, traditional interests and operating turfs. It also represents challenges, for example creating a financial clearinghouse system among electronic toll collection agencies sharing the same technology.
 - Mechanisms for interagency planning is a necessity. The lack thereof now in our region is a deficiency which affects a broad range of factors including our quality of life and global competitiveness.
 - Design capital projects to anticipate future needs, including changes in technology, demand and joint operations induced by intermodalism. Adapt our facilities to a new intermodal standard as they are "brought to a state of good repair".
 - Not enough money exists and too many strings are still attached. A regional tax for transportation that maintains a regular and predictable cash flow through the region is required as an independent (of federal) revenue source.
 - Educating practitioners is as important as educating the public in overcoming modal and institutional bias. Overcoming modal bias on the part of modal advocates, will be an element in balancing (intermodally) transportation programs. The new zeal for fixed guideway/rail transit among elected officials can be productive, if it is directed at accomplishing financially realistic and technically feasible projects.
 - Learn from the experience of others. In the field of surface transportation, the U.S. has gone from innovator/leader to a follower, playing catch up during the past four decades. We have to learn to adapt others' innovations and advance our technology and practices based on mistakes and breakthroughs made elsewhere.

Breakout Session 2, Maintaining Economic Development:

Economic growth is very much at the heart of the nation's transportation policy. This session focused on how the transit case study and other general transportation issues in other areas of the nation are aimed at supporting economic development, while addressing mobility, energy and air quality concerns.

Transportation networks in most major metropolitan regions in the east coast are very complicated. Jeff Zupan, of the Regional Plan Association, commented that in the New York, Connecticut, New Jersey region "there are multiple transit operators crossing any number of jurisdictional boundaries." Although the ISTEA metropolitan planning provisions encourage coordinated planning efforts in multi-state areas, it still leaves planners with a number of major issues to resolve when making critical decisions to evaluate improvements to the network. A frequently overlooked factor is land use. Zupan also stated that "a sample of transportation improvements include thru-routings and subway and rail integration. There needs to be a process or a mechanism which provides for the implementation of these interjurisdictional and multi-operator projects. Public participation should begin early in the planning process."

Floyd Lapp, NYC Planning, stated that the lack of funding is a planner's blight. We need to identify innovative funding sources. For example rail access to New York's airports is finally underway because of the availability of

funds through the Passenger Facility Charge (PFC). Suggestions for funding sources include tolling the NYC East River Bridges and Congestion Pricing. Lenny Braun, Consultant, also echoed the same concern for a more dedicated funding source for transportation improvements. Larry Filler, TransitCenter, stated that "TransitCenter looks at the provision of transit services from a business perspective. Linkage of the existing transportation system is important. The customer does not care if it is one agency or another that operates a transit service. The customer's goal is simply to get from point A to B, without hassles. The system has to be as easy to use as possible. If there are new services, they must be marketed, like any other product." Walter Ernst, Amtrak, highlighted the critical linkage Penn Station, NY plays in a major metropolitan environment. He stated "to operate in this environment there are a number of concerns Amtrak and other agencies must address in operating in this intermodal hub. For example Amtrak operates intercity service at the same time that the local commuter services operate," causing competition for limited space. Additionally there are different service requirements for intercity operations. Chief among them is speed of service (Amtrak is beginning high speed train service on the Northeast Corridor from New York to Washington). Ernst also stressed the importance of cooperative efforts in working with other agencies in providing seamless mobility from an operational point of view. For example he pointed out the improvements New Jersey Transit, Long Island Railroad (LIRR) and Amtrak are investing in Penn Station NY.

There was also concern of the relationship of planning to operating needs. John Bennett, Long Island Railroad, stated that capacity/operating constraints at Penn Station NY must be taken into account, when considering plans to increase rail service at the station. To address this concern LIRR is undertaking a Network Strategy Study to provide for improved and efficient operations. The Railroad will look at the viability of service to Grand Central and the possibility of diesel fuel replacement.

Mary K. Murphy, Port Authority of NY & NJ, highlighted Port Authority efforts in linking transportation improvements to economic development in the New York/New Jersey region. She noted a Network Analysis undertaken by the Port Authority in its primary corridors: Northern, Midtown, Southern. Each which is an opportunity for economic development. For example, Northern Corridor — usage of advanced technology (i.e., IVHS). Midtown Corridor — improved goods movement and an opportunity for economic development in transit terminals. Southern Corridor — improved vehicular/HOV capacity, including goods movement.

Breakout Session 3, Metropolitan Planning and Management Systems:

The ISTEA planning and management system guidance/requirements for metropolitan areas reflect sensitivity to concerns regarding efficiency, connectivity, energy competitiveness and air quality. Various factors must be considered by MPOs in developing

transportation plans and programs. Based on existing experiences, panelists exchanged information on issues which should be addressed — noting that we are already two years into the ISTEA framework.

The importance of public participation was again stressed in this session. It was highlighted that without a buy-in from the users of the system, operators and agency cooperation, it would be very difficult to move forward on intermodal projects that must pass through the MPO TIP process.

Noting that there has been a shortfall in funding on a year to year basis, we need to make more informed decisions on leveraging our limited dollars. Ray Ruggieri, New York Metropolitan Transportation Council, noted the role the management systems will play is in helping us make informed decisions before we dedicate funding for transportation improvements. Although the management systems regulations were not released at the time of the workshop, federal guidance allows the states and MPOs to tailor the management systems to fit their regional needs. Therefore, the IMS which addresses both passenger and freight concerns will be developed by each state, in order for each region to include unique factors which will assist in addressing their individual needs.

Given the shortfall in ISTEA funding, Stan Gee, FHWA raised the issue of flexible funding. He stated that because of limited funding, flexibility will be “evolutionary not revolutionary, for example park-n-rides

became eligible for highway construction funds during the 1980's." In short the promise of ISTEA is yet to be maximized.

Funding by far was the headline topic of discussion. Funding issues included:

- **Improved mechanisms which will allow everyone to know how to obtain funding and what types of projects are eligible. Again, the issue of increased public involvement in the MPO TIP selection process.**
- **The need to include major modal operators in the MPO TIP process was echoed throughout the workshop and more so in this session. It was recognized that those operators on the front lines who must deal with the public and private sector groups on an everyday basis should have a voice in the decision making process, as clearly stated in the federal MPO TMA guidelines. According to participants, the problem is that the people rating the projects are often not responsible for construction or operations.**
- **MPOs independence from State DOTs was also highlighted. It was said that MPOs should be "brokers."**
- **Data needs was also an issue. There is no need to collect or initiate the development of new data if you already have data, the problem is whether or not the data is reliable and**

will fit the region's unique needs, this is especially important during the development of the IMS.

- **Cooperation and partnerships during the MPO TIP process is important. Again this is back to increased public involvement in the decision making process.**
- **Flexible funding and funding innovative projects was needed in order to more equitably balance highway and transit funding.**
- **Additionally it was brought up that there should be two ways to choose projects for funding (1) consensus at TIP time and (2) if the project is in the long range plan, it should be eligible for funding.**
- **The "promise of ISTEA" will not be realized as long as there is a shortfall in the authorized funding levels.**

Breakout Session 4, Partnerships and Intermodal Implementation:

Forging partnerships and implementation of intermodal projects are both pressing issues as we approach our third year into ISTEA. The ISTEA Declaration of Policy and the planning provisions stress cooperative efforts in developing a National Intermodal Transportation System. Many issues regarding cooperation and partnerships were highlighted throughout the three-day workshop. Several comments suggested that although the intent of the ISTEA was to enhance cooperation

and partnerships in order to move past the planning stage, construction of intermodal projects may not happen. It was stated that as long as the MPO TIP process does not include participation in a real and meaningful way by including those parties impacting the MPO decision making process, partnerships will not ever be given the opportunity to develop.

Bryan Clymer, Railway Systems Design, noted that "intermodalism is a process, not a project, which involves connections, coordination, choices and cooperation. At present, the nation is only at the phase-in stage, perhaps redefining infrastructure and partnerships which already exist under the new guise of intermodalism. Without adequate funding, intermodalism will never spread beyond the planning stage. In addition, the process of authorizing projects and securing funds takes too long. A more efficient process might spur private interest in an area in which its representation is sorely lacking."

Major themes from this session included:

We cannot ignore the impact of existing government structure on the implementation of intermodal projects. Political factors could impede true intermodalism. Relatively short term lengths for elected officials increase the difficulty of securing a political leadership who can stay a project's entire course of development. Another problem is the polar nature of funding distribution. Interstate, intermodal competition works against the formation of successful partnerships.

Current funding processes instill belief that the funding of one given mode necessarily detracts from the funding of another. Everyone competes with everyone else, and projects which do receive funds need not necessarily complement each other. Common sense dictates that a transportation corridor be considered in its entirety. Funds should be distributed on the basis of what is needed to make the whole corridor work more effectively, and what is needed to maximize net social benefit.

Implementation: Planning as a friend or foe? Intermodalism must move from a whirlpool of planning, conferences and studies into a state of action. Implementation is necessary to build credibility in the program. In the early stages, planning provides a means to incorporate public participation, design a well liked project, and secure the political support needed to implement it. At the same time, a community must define its objectives and identify what is achievable. In reality, one should pursue the optimum project subject to the constraints of time and money versus the perfect project.

Also, neither planning nor partnering will be successful unless they take on a specific and human form. Depending on whether the planner has incorporated increased public involvement into the decision-making process, planning could be viewed as a friend or foe. Citizens' committees, written agreements, and interagency cooperation all work in conjunction to move from selecting a project to implementing it.

Appealing to the growing environmental consciousness of the nation, intermodalism could be used by planners as a useful tactic to instill linkage projects with a sense of urgency. To date, the transportation sector has not capitalized on the inherent link between transit use and increased air quality. In New York, transit remains largely outside the realm of air quality management and there is a general misconception that cleaner fuels alone will alleviate the air pollution problems associated with transportation. Intermodal projects stand a much greater chance of success if they are not developed in a vacuum. One must always be aware of the various parameters involved, one of which is the environmental area.

Comments by panelists of partnerships and implementation session:

Martin Robins, Hudson River Water Development, New Jersey Transit:

The Hudson River Project (HRP) is a twenty mile light rail project, presently in the implementation stage, linking Jersey City to Bayonne. The HRP ties together various waterfront sites and, by carrying Manhattan-bound workers to the edge of the Hudson, increases the accessibility between New York City and New Jersey neighborhoods immediately across the river. A critical process of consensus building moved the HRP from the planning to the implementation stage. Planning involved a very open and community-oriented structure including an advisory committee, citizens' groups, public meetings, newsletters and regular mailings. The HRP also profited from a strong political leadership.

Matt Coogan, Consultant in Transportation:

In considering the implementation of intermodal projects, it is important to consider whether the trend is towards or away from partnerships. Looking at various airport access projects, particularly in Europe, one can find evidence of both processes. For example, at London's Heathrow airport, a potential partnership between local rail and airline operators recently dissolved. The airline industry resolved to build its own dedicated line into London, concluding that independent service constituted the least cumbersome method of providing customers with transportation into the city. At Frankfurt airport, on the other hand, Lufthansa established a working relationship with German rail operators. Lufthansa acknowledges the necessity of partnerships and does not want to be in the business of providing ground transportation.

Edward O'Sullivan, Aviation Dept., Port Authority of NY & NJ:

The Port Authority Airport Access program involves construction of a dedicated light rail line to link midtown Manhattan with LaGuardia and John F. Kennedy International Airports in Queens and provide Newark to midtown access with a stop on the Northeast Corridor into Penn Station NY. The project, though conceived and administered by the Port Authority, is truly a partnership of many interested parties. The project's steering committee includes general and technical representatives from the local, state, and federal government levels — all of whom

recognize the importance of adequate airport access in keeping current businesses in New York City as well as wooing new ones to the area. Second, the issue of funding has halted most other airport access projects. The current project includes a \$3 passenger facility charge which is expected to provide \$300 million of revenue sources for construction of the access line.

George Cancro, Ferry Programs, Port Authority of NY & NJ:

The Port Authority hopes that all new ferry service will occur in the form of public-private ventures, similar to the Hoboken ferry. Such arrangements involve for-profit private operators, thus avoiding public subsidies and facilitating the speedy establishment of routes which meet consumer demand. In the case of the Hoboken ferry, the Port Authority oversees general operations as well as maintains the terminals on both sides of the Hudson River.

Parvesh Swani, Long Island Railroad:

In the railroad industry, passenger and freight operators have maintained a generally antagonistic relationship, each viewing the other as a nuisance. The assets of any railroad company are usually owned by either a passenger or a freight line, who then gives operating rights to the other. By mixing the two types, one always increases the operating risks involved. In addition, certain issues arise such as 1) how to price services, (2) the impact of refrigerated freight operations on-time passenger performance, (3) the efficient utilization of excess capacity, albeit on a restricted time scale, (4) safety, and

(5) clearance requirements which may limit urban tunnel use for freight cars.

In Long Island, 98% of the freight that moves on and off the island is transported by truck. Since LIRR is a high density commuter rail service, the implication is that it contains much excess capacity to run freight operations during off-peak hours without affecting the quality of passenger services. First, LIRR must adopt an operating system in which freight intermodal hub transfers occur without affecting passenger mobility. For example, freight cars should be cleared and removed immediately upon arriving at their destination, and not be allowed to hamper track utilization.

Bernard Cohen, New York MTA:

Considering the issues raised by the panelists, one wonders whether there is any rhyme or reason to intermodalism from a regional perspective. The New York metropolitan area is multi-modal, but not necessarily intermodal. There are three important questions to consider for successful intermodal project implementation: (1) What are the objectives for the region? (2) How does one develop support for a given project? (3) How are the entities involved going to pay for a project?

VI. INTERMODAL TOUR REPORT



Workshop attendees were given the opportunity to participate in one of two intermodal tours, including a visit to the Port Newark/Elizabeth marine terminals and Newark International Airport.

One of the highlights of the sessions in New York, was the opportunity for participants to experience and observe an operational point of view by actually seeing intermodalism at work. The Port Authority of New York and New Jersey staff acted as tour guides and presented an overview of the operations and plans which were elements of the tour. Attendees were given the choice of participating in one of two separate intermodal trips which were offered:

1) By bus and ferry to LaGuardia Airport and John F. Kennedy Airport facilities;

2) By bus and ferry to Port Newark and Newark International Airport facilities.

Port Newark/Newark International Airport Intermodal Tour

Participants of the Port Newark/Elizabeth - Newark Airport trip saw one of the largest intermodal goods movement distribution hubs in the world. This field trip was particularly appropriate for the conference in that it was truly "intermodal," both in terms of the transportation provided for participants, as well as the facilities viewed.

A short bus trip from the hotel connected with one of the Port Imperial ferries on the West side of Manhattan and continued for a chartered trip down the Hudson River and across New York Harbor. In the course of the trip, the ferry passed over the Lincoln and Holland Tunnels (a total of 10 vehicular lanes) and the Amtrak and PATH rail tunnels (total six tracks).

Some of the other intermodal highlights of the ferry trip included:

- > **The Hoboken Rail Terminal (served by heavy rail, light (subway) rail, bus and ferry operations);**
- > **New York Cross Harbor Railroad car float terminal at Greenville (Jersey City), the last rail float operation in the harbor;**
- > **Port Authority Auto Marine Terminal at Jersey City, a specialized facility for import/export automobiles with landside truck and rail connections;**
- > **Global Container Terminal, a 100-acre modern container ship facility with 1800 feet of berth space;**
- > **The Military Ocean Terminal at Bayonne Yard ("MOTBY"), transfer point for many ships during the Desert Shield/Storm operations; and**
- > **The Staten Island Ferry, operator of the largest passenger ships in the world (over 6000 capacity).**

After passing some of the historic and scenic wonders of the famous Harbor (World Trade Center, Statue of Liberty,

Ellis Island etc.), the ferry proceeded up the Kill Van Kull, the main ship channel for the seaport and site of ongoing dredging operations. Passing under the Bayonne Bridge (5 million vehicles/year) the ferry entered Newark Bay, and passed along the berths of the massive Port Elizabeth and Port Newark complex (2600 acres, over 19,000 feet of container ship berths, over 1 million containers/year). One of the highlights visible from the water was the site of the first marine container terminal in the world opened by Sea-Land in 1956, and long since outgrown.

At Port Newark, the group made another intermodal connection and transferred to buses again for a land-side look at the facilities. Port Authority guides pointed out the great variety of operations taking place, including automobile importing, exporting and preparation; orange juice processing (brought in refrigerated tanker vessels from Brazil); bulk and neo-bulk products (scrap, lumber, paper, etc.); and, of course, containers. Participants had time to disembark and view a scale model diagram of the port at the Sea-land terminal, which illustrated the infrastructure necessary to operate a modern port and provided a remarkable contrast with the older piers, which are still numerous around Manhattan and Brooklyn.

Before leaving the port complex for Newark Airport, the group had time to stop at the Port's ExpressRail on-dock doublestack rail transfer terminal and to watch a Maersk Line ship being "worked" (loaded or unloaded with containers) using several of the large container cranes at once.

Having viewed the port from the water-side, the bus trip to the nearby Newark International Airport gave the participants an opportunity to travel over one of the primary landside port access routes and see the mixing of traffic from both facilities as it flowed on to the regional highway system.

At Newark International Airport, the group inspected the intra-airport monorail system under construction. It will link the three main airport terminals with remote long term parking lots and car rental facilities on airport. The monorail is due to be operational in late 1994. Stations both within the terminals and at the remote lots were inspected along with a maintenance facility, all in various stages of construction. A novel feature of the monorail is that the stations were incorporated into the terminal designs and construction twenty years ago. A major internal roadway redesign is underway and a new international arrivals terminal is under construction in the Terminal "B" area.

At Newark, the existing monorail will be the first direct airport linkage in the region and explores the furthest reaches of air/surface intermodal transportation capabilities.

After reviewing the Newark operations, participants traveled back to the hotel by bus and were treated to an experience with New York rush hour traffic.

LaGuardia/JFK Intermodal Tour

The LaGuardia/JFK tour group viewed a large scale program of airport improvements at JFK, while also seeing the extensive air cargo facilities in action.

At LaGuardia Airport, the group also viewed the airport improvements, while a presentation was being given on a major JFK/LaGuardia initiative in its early stages of design and environmental processing. This involves a new Automated Guideway Transit system (AGT), which will link the airports with major existing rail passenger facilities and the Central Business District in Manhattan. Funding for this and a similar scale project in Newark Airport is being provided by a three dollar departure "Passenger Facility Charge" (PFC) now being collected at all three airports.

The AGT will perform several airport access functions simultaneously:

- **Provide inter-terminal transit within the JFK terminal area;**
- **Connect the terminal area with remote parking and the New York City subway system at Howard Beach;**
- **Link LGA and JFK;**
- **Serve Jamaica's Long Island Railroad and subway stations;**
- **Link LaGuardia with the Long Island Railroad Port Washington Branch and subways; and**
- **Continue on into Sunnyside, Long Island City and Manhattan, terminating at Third Avenue in the East Mid-town Manhattan area.**

The tour buses followed the route of the proposed AGT between the two airports. Use of the PFC, in the NY metro area, is the first and largest scale off-airport rail ground access use of these funds. Tour buses returned the workshop members back to the hotel after a brush with New York rush hour traffic, in itself a sobering intermodal experience.

VII. INTERMODAL PRESENTATIONS BY:



Road (NJ Turnpike), rail, marine (Port Elizabeth) and air (Newark International Airport) transportation facilities in close proximity to each other illustrate the importance intermodal movements of passengers and freight to the region.

Michael Huerta,
Associate Deputy Secretary, USDOT

One of the most significant issues in our society today is intermodalism, the bonding element of a sprawling national transportation system. International trade is one of the fastest growing segments of our economy and the most obvious place where jobs will be generated for the rest of this decade and beyond. Last year, the movement of 865 million metric tons of foreign cargo contributed \$35 billion to the Gross Domestic Product. Cargo valued at \$55 billion moved through this Port (Port Newark/Elizabeth), the second highest dollar figure of any port in the country. With all the events on the scene today (i.e., NAFTA, the recent GATT agreement), it's a safe prediction that cargo ton-

nage will grow substantially for the rest of this decade.

Because every mode represented at this workshop carries that cargo or the people who work on it — we are all committed to doing everything we can to ensure that the intermodal freight movement is efficient and seamless. We know that no matter how efficient the individual components of the transportation system may be, the key to timely movement of international freight is the intermodal connection.

Ports are the critical transfer points between land and water modes. Any bottlenecks at the ports threaten system efficiency. For this reason we must consider both the landside and waterside infrastructure of the entire system.

Thus, it's no exaggeration that our competitiveness in the international marketplace and our national security depend upon the intermodal connections we make in the next three and a half years. With "just in time" manufacturing now a common practice worldwide, the intermodal connections take on added importance because ocean carriers provide further value-added services in the transportation and distribution chain. These include consolidation, labeling, logistics management and warehousing. Systems for bringing together water transport, airports, rail and trucking to facilitate the efficient movement of intermodal freight at our ports must be a national priority. We can no longer afford to have the Interstate Highway ending four blocks from the marine terminal.

ISTEA recognizes the importance of intermodalism for efficient transportation systems and the necessity for sound, modern infrastructure, including border crossing facilities, for meeting future transportation requirements. Let's step back for a moment and look at where you fit into this national priority. It's very appropriate that we come here to the Port of New York and New Jersey, which is sort of the birth place of intermodalism, to begin our nationwide dialogue on how to work together and link up America's transportation system. From the 1950's when Malcolm McLean shipped the first containers from Port Newark, New Jersey, to Houston, Texas, on an oil tanker and started a revolution in ocean shipping, to the present date, transportation people in this bi-state area have been leaders in intermodal-

ism. You have always provided the ideas and the action for progress.

A good example is your freight intermodal case study —Circumferential Commercial Corridor. This study addresses reliability, connectivity and flexibility—mobility concerns which were the key intermodal themes of ISTEA.

As you've heard the past day and a half, we are here to enlist you in a partnership that will pay rich dividends for your region and this nation. We want to work with you to build region by region the safest, most efficient, most accessible transportation system in the world. We need your leadership. "We're all in this together," and by working together, we will all benefit.

The Office of Intermodalism is the keeper of a broad national perspective of transportation activities. Although I began on an intermodal freight note, we are concerned with moving people in and out of Atlanta during the 1996 summer Olympics as we are moving freight through the Alameda Corridor from the Ports of Long Beach and Los Angeles, or moving freight across the U.S./Mexico Border.

We are as concerned with integrating a high speed rail network into an intermodal passenger system as we are with facilitating dredging work at the Port of New York. (Incidentally, Secretary Pena seized on the port dredging issue very early on and committed his department to sit down with the Corps of Engineers to see if the process can be made to work better. If there ever was a case for reinventing government, it's on the port dredging process.)

But the point is this: The Administration keeps a broad perspective as to the modes, passengers and cargo, and regions of the country. And it's one of my main duties to maintain that perspective and share it with you in the regions.

My office also is the facilitator for projects that cross modal lines and raise significant questions of who is in charge and what funds can be used. (For example, the Alameda Corridor Project would benefit the communities and Ports of Los Angeles and Long Beach by consolidating port-generated rail and truck movements within a single corridor. This project is a test case for speeding up the federal permitting and review processes.)

And it's the coordinator of modal activities that contribute to better intermodal planning within the Department of Transportation and among our customers. (For example, through the efforts of the Office of Intermodalism, a decision was reached among the FTA, MARAD, the Coast Guard and FAA to designate the FHWA as the lead agency for the Multimodal Center at Miami International Airport.)

Recent activities of the Office of Intermodalism have been taking an advocacy role in rulemakings. Secretary Pena has stressed that the Department must find practical solutions to real world problems. He has made it a high priority to eliminate needless regulations and to work with our customers to resolve problems.

We've also taken an advocacy position on a number of freight issues, on technical assistance projects and in outreach programs such as this one. This is a good start, but we will be doing

much more. We have to develop a better public understanding of the word intermodalism in order to be successful. I don't believe in wasting time try-



Michael Huerta, USDOT Associate Deputy Secretary of Transportation was a keynote speaker at the Intermodal Workshop. He outlined the national intermodal policy which also takes into account economic development and competitive issues.

ing to define the term. I believe that understanding will come when people see the tremendous job-generating benefits of intermodalism —and that will come very soon if you will join us in making it happen.

This meeting is a good start. Some of the revelations that have come forth in the last day and a half of dialogue here have emphasized that all of us — at every level of government — in every mode of transportation — need to be more creative in looking at ways

to improve and sustain our transportation systems. As I said at the outset “we are all in this together.”

“Civilization,” historian Arnold Toynbee has written, “is a movement not a condition; a voyage, not a harbor.”

Transportation, I suggest, is both a movement and voyage. We are propelled by change, and innovation is the only safe harbor we will ever know. The innovation and change of this decade and the 21st century rests today in a truly unified intermodal transportation system.

**Lucius Riccio,
Commissioner, New York City DOT**

Each generation, and each discipline for that matter, has a word or concept that captures the mood of the period and the direction of thought. No word better captures the direction of transportation planning than intermodal.

New York City is appropriately recognized as the intermodal center of the nation. Our trains, subways, buses connect into an almost seamless web of public transportation, linking each facility at critical points or stations.

Yet public transportation use continues in its downward trend, with 53 percent of New Yorkers using public transportation to commute in 1990 compared to 56 percent in 1980 and 62 percent in 1970. In order for us to capture or recapture the market for public transportation we have to make intermodal a reality beyond subway and rail connections. We need to re-examine all of our facilities to see how we can better meet people’s traveling and commuting needs.

Historically, New York more than other cities, had two competing trends—public transportation advocates and highway and bridge advocates. As such, while intermodal worked in some respects, much of our transportation system, primarily the highway system, was built exclusively for cars—either for commuting or recreational purposes.

We all have heard the stories of Robert Moses constructing parkways with insufficient clearance for buses, and while public transportation was discussed prior to the construction of the highway system serving our airports, it never made it into the first major plan.

Beyond its name, ISTEA will allow us to make our city a true intermodal center. Let me give you just a few examples that the New York City Transportation Department is working on. Our bridges, the four East River bridges were built as public transportation facilities, carrying trolleys and trains, as well as pedestrians and vehicles. Today, of course, with the exception of the Manhattan and Williamsburg Bridges, no trains utilize these structures, nor pedestrians in some cases, and buses must compete for space with other vehicles. This winter, DOT will implement a high occupancy vehicle lane on the Queensboro Bridge so buses coming to Manhattan in the morning receive priority.

Also, our engineers have redesigned the construction on the Queensboro Bridge to allow the Port Authority’s Automated Guideway Transit system to travel across the bridge and provide a Manhattan connection. Similarly,

designs for the Williamsburg Bridge will allow future generations to add additional trains, much as the designs and construction work in the 1950's allowed for additional vehicles on the Brooklyn Bridge.

Water transportation was the basis of New York's growth, and will hopefully become more appealing in years ahead. The Staten Island Ferry, which has been operated by the city since 1905, remains our town's premier ferry. Because of the fire several years ago, we are prepared to build a world class intermodal facility that will enhance connections to buses and to the subway by building the terminal in such a way that the subway is actually inside the terminal itself.

**Richard Kelly,
Director, Interstate Transportation,
Port Authority of NY & NJ**

Though our region is an intermodal leader, we don't have here or in most other American business centers the level of efficient, intermodal transportation found in some foreign gateways. We need to do better. The reality of our technology-enhanced society is that business does not have to locate in an urban center to have access to its markets. With modern communications, technology businesses can locate just about anywhere. Corporations now make location decisions based on three critical factors (1) quality of life; (2) the availability of a trained labor force; and (3) accessibility.

Keeping our big-city regions competitive and livable is likely to take an inspired effort, using all the modes available to us to get the most effective

combination of services for moving goods and people. I want to begin with some lessons learned from the Port Authority's efforts in meeting our mandate to ensure adequate, reliable interstate movement of people and goods.

My agency acted three years ago to merge three separate departments within the Port Authority which managed our bi-state surface transportation facilities and planned with others for meeting future needs.

We like to reflect on this as our recognition that intermodalism is here to stay as we merged our planning; rail; terminals, bridge and tunnel crossings under one Interstate Transportation Department responsible for the movement of both passengers and freight.

Many of you are probably familiar with at least the names of our key facilities. North to south they include the George Washington Bridge and Bus Terminal; the Port Authority Bus Terminal; the Lincoln Tunnel (including the Exclusive Bus Lane); the Holland Tunnel; the PATH rapid transit system; the joint venture Hoboken ferry; and the three Staten Island Crossings.

These facilities are a significant force in the regional economy. They serve nearly all of the region's 15 million people by making vital connections for businesses and consumers, and for commuters and families. Our bi-state facilities handle over 500,000 commuters on a typical workday. Commercial activity in the region also is heavily reliant on the facilities we operate, with in excess of 7 million trucks annually utilizing our interstate crossings.

Intermodalism is what makes our bi-state linkages work. With the other regional transportation agencies, we use rapid transit, commuter rail, autos,

working together to collect essential freight data to develop a sound planning foundation to build and improve our ability to move goods in this region.



Richard Kelly, Director, Interstate Transportation Department, Port Authority of NY&NJ, addressed regional mobility concerns and their impact to the New York/New Jersey economy.

buses and ferries to carry those half a million commuters every weekday. That's like moving the whole population of Denver back and forth between New York and New Jersey each day.

There are also essential freight movement linkages that require close cooperation with the region's transportation providers. We have taken initial steps with both the NY and NJ State Departments of Transportation in

Trucks on our crossings move more cargo tonnage than the region's ports and airports combined — often carrying goods that hours ago were on a freight train from the Midwest, a freighter from Europe, or a "747" from Asia.

Intermodalism is the art of finding the fastest, cheapest, most reliable ways to get somebody or something from Point A to Point B. Another word for that is efficiency, and it's no accident that those two words come together in the

name of the nation's new blueprint for better surface transportation —ISTEA.

Along with the Clean Air Act, ISTEA demands a new standard of performance-based transportation management to meet a lot of goals: personal mobility, competitive commercial services, cleaner air, and community input.

ISTEA gives us some of the tools to blend the needs of business and the economy by placing greater emphasis on more environmentally friendly modes, including HOVs, transit and rail freight. It isn't going to be easy. ISTEA directed the states and metropolitan planners to prepare long-term transportation plans, and made federal aid more flexible. That's a start.

ISTEA falls short, though, on two counts. It doesn't really increase flexible funding to levels that match the sharply higher performance standards the new federal laws mandate. And it does not fully recognize the genuine problems of meeting regionally scaled federal goals in areas governed by many local jurisdictions in more than one state. However, with patience and a sense of common purpose, regions like ours can take advantage of the new federal direction. My agency's experience suggests that intermodalism is a key ingredient for success. Intermodal corridors, multi-modal solutions, and funding pooled across modes — that's what intermodalism means to us.

It means putting customer benefits and regional gains ahead of turf, and overcoming modal biases that ignore the market realities of human behavior and business needs. It means working with a mix of both public and private sector

interests to meet customer needs.

This has become particularly evident to the PA through our success with the joint venture Hoboken to Battery Park ferry service. We see ferries playing an even more significant role in this region for both the movement of people and goods.

In looking long-range at the markets the Port Authority serves, efficiency requires making improvements that will serve and shape growing demand. Our strategy includes targeted investments involving all the modes we use now, along with support for improved approaches to our facilities and wider use of rail and waterborne options for moving freight. Like every other agency, our budgetary limits are real. But we can't afford to let that limit our imagination, because the solutions here and in similar regions more and more will be intermodal, and multi-agency. We can't afford not to include our customers in making our plans for the future.

Real efficiency will pay off. The promise of real efficiency is that it will attract public support. And that's what will make new investments possible and affordable.

The Honorable Robert Roe, Former U.S. Congressman (D - NJ)

There were a lot of key points/issues in the ISTEA that people are beginning now to understand. Let's not kid ourselves - all of the dreams we're going to have in the world don't go any place unless you can arrange for a way to get things done.

How can we implement an "Action Agenda" for ISTEA in this country and

how could we make something work in the country and get it done? I'm not totally consumed or absorbed in the transportation issue - I served in Congress for twenty-three years and we worked on a whole series of very important national policies, but ISTEA and its mission became to me a much broader issue, not just a dream, but a purpose for this country and where we are going. The reality that we have to face is that the old way of doing business is over and people have to understand that quickly. When somebody mentioned the forces of changes and forces of reality, they should also mention the forces of prejudice and some people's minds who are just glued on the old way. The old way is over.

People who have spent a lifetime, including me, in public office, talking about transportation areas particularly, we become glued on the one thing, that is the whole solution - every time we have a problem in transportation, we use that basis to make our decision. That's not wrong, that's how we are - we're human beings. But we have to tell new administrators and people in public office now to look to the future. What were we trying to achieve? What was the idea of ISTEA? You have to educate people and you have to understand what ISTEA means, so before you can implement ISTEA you've got to understand what they meant when they wrote it.

Can you picture any of you in public service or working for a department having ninety-seven conferees on one particular bill with seven or eight different committees involved? I served as the Chairman of the Public Works Committee in the House and Chairman of the Conference Committee on ISTEA, so there is a special rapport

that comes from dealing with ninety-seven senators and members of the House, each one with their own ideas of what the direction should be. We knew that our goal was to change national policy and there was a reason to change national policy.

This is not a transportation bill alone. Those people who come back and say - well we're talking about transportation here and we're talking about Intermodalism. It is not that kind of a piece of legislation. It is a conglomerate piece of legislation that points to the direction this country will go economically in the global marketplace. When we went to the floor of the House, the debate on Intermodalism lasted three days and here we brought forth this giant new policy which everybody was rightfully proud of and they had a great many people working on it and many people in the public sector worked on it including probably some of you, too. We're rattling off Intermodalism and we made an assumption. We thought people understood what we were talking about.

Bob Walker, from Pennsylvania, served an enormous purpose in the whole birthing of the ISTEA legislation and he came back and he took the well after we had made the explanations. Norman Mineta and I and, of course, Senator Moynihan on the Senate side, are laboring over this new policy and you feel kind of puffed up and that you are going to help change the direction of the country and now Mr. Walker gets the floor. He asks to speak on this issue and if you know Bob and if you have ever seen him on CNN, he's a very good Representative. He comes swaggering down and he says "I want you to know something. What is this Intermodalism? Now we're

going to have more taxes because we got Intermodalism and somebody's going to think of more ways to spend money." He goes on a tirade and says, "we don't know what Intermodalism is - I don't know what these people are talking about." This is all part of how laws are made. He was making his point and, besides, you can't even find an explanation of Intermodalism in the dictionary. It's not even in the dictionary.

So what is this new thing that they're bringing to the floor of the House which spends more money and may cost the taxpayers more money - it's not going to achieve anything and so forth and so on. The vote is going on for three days and this is the first day of the debate and it goes on down and we finish up because the battle will take place the following day. I go back to the office and I say, "hey wait a minute" to our people and I tell them to get some dictionaries so I can look something up. I want to see what the dictionary says Intermodalism is. We looked in the dictionary and Mr. Walker was right, it wasn't in the regular daily dictionaries. How could this be? Here we have developed an entire policy and transportation economics for the United States, and it wasn't there.

Now we have to go back and debate with Bob the next day, and I can't go back to the floor of the House and say to them that we looked it up in the dictionary and you were right. You can't do that in the debate. So we got in touch with the Library of Congress. Something is obviously wrong here because we know there is such a word as Intermodalism and we put the Library of Congress to work. They went through more concise dictionaries, and lo and behold, of course its

there. They gave us a particular section from the dictionary from the Library of Congress and we brought it back and had it blown up so that, when we went to debate the next day, we could make our point.

We labored in with the chart, turned it around and they didn't quite know what we were going to do in the well of the Congress. When our time came in the debate to respond, we went ahead and we brought forth this great achievement from the Library of Congress blown up five times its size.

"Don't you read? Can't the gentleman from Pennsylvania see what this is all about? Here's what the dictionary says. Don't you have a dictionary?" Thank God we have the Library of Congress.

You will always have those people who oppose you and your ideas just for the sake of opposition, no matter the justification. It doesn't matter to look behind it and understand what the goals are, what you're trying to achieve, it's easier to be negative. You get better pressure, better attention if you're negative. The point is, this conference is about trying to build something and trying to make something work, which was the theme of all three of your presentations this morning - let's get on with it! We can't debate it for the next twenty years - we know what we're doing - go for it! Where did it come from? It took years of preparation to put together what we meant. We recognized some very basic issues which I think any citizen who understands the country can recognize themselves. The focus in America is on the economy of the country. The rebuilding of infrastructure, that's pork, by the way. Pork is in your area if it's affecting you and you're taking from me, or I oppose your project. It

doesn't matter whether it's Intermodal or whatever, the easiest way to attack is to say it's pork and a boon-doggle. I had a very prominent person call me yesterday from Washington to say that when we refine the Intermodal bill in the next go around, we want to be able to take out some of these special demonstration projects because they're pork. Where do you have the right to say a special demonstration project is pork?

The whole basis of the transportation system in this country was based on large demonstration projects. The George Washington Bridge was a demonstration project. Could you build such a structure in that era? Would it work? We're talking about jobs for Americans, we're talking about America's competitiveness, all of this went into the decision-making. When people use the word competitiveness, what do they mean? When we talk about competitiveness, we are saying that, in the year 1993, these decisions were made in this legislation based on a recognition that, unless America really gets into the global marketplace in every respect so that we are a competitor in the global economy, we will lose out. We're losing out right now and we have to be able to make that attack.

If you've been to China recently or the Far East or to Korea, the dynamics explode around us: cranes all over the place, building infrastructure, building productivity, building factories and facilities for improving the quality of life of the people of this world. Major competitors to us go to United Europe today and see what's happening. Are they uniting because economically they want to make it? Yes they do. They want our marketplace and they're fighting for our marketplace as

is the case out in the Asiatic area. Now we've got to fight to be able to maintain that quality. We have to be able to maintain our ability to compete, and that was part of the decision that was made in the ISTEA bill. That's what we interpreted the competitiveness issue to be, and we brought another point up. You hear all these people saying we have to have all these new things, we need a new health-care program, we need better education, we need better transportation, we need better this and better that. How are we going to pay for it with a three trillion dollar deficit?

Part of the decision-making here was that we wanted to be able to help America create the new wealth for America. Where will the revenues come from, short of taxation directly upon the people? Where will the revenues come from to be able to provide the fiscal resources we need to improve the quality of life for the people of this country. We can't print it. It's not going to come from there, it's going to come from how we battle in the International marketplace and how we improve the business climate in this country and the revenues derived coming into this country. We knew and understood that and that was part of the decision that was made in writing the ISTEA.

In New Jersey, talk about intermodalism, we have the turnpike, one of the largest, most dynamic transportation systems in the world running north and south through our state. The Port Authority is spending a lot of money on improving access to Newark International Airport and then, nearby there is Port Elizabeth, this enormous port where goods and materials are shipped. You see these facilities and you notice that you can't get to them,

you can't get from one to the other, literally and figuratively. If you talk about Intermodalism, you must bring them together.

We ought to be able to devise transportation systems that are efficient and effective. When we used to devise legislation in the public works community, we'd have a separate bill for the highway program, we worked hard, we had our hearing, and we signed that bill and that bill was a great achievement for transportation. We would do the aviation bill over here, we worked hard on that aviation bill, and these were new ideas and new dramatics and so forth and we passed that bill and we applauded ourselves. What a great job we did! Then we would do the water resources bill for improving our ports and inland waterway transportation system and we would applaud ourselves and say what a good job we did except for one point: they didn't relate to each other. We were absolutely countervailing the efforts we were trying to perform and we were wasting money. There was no institutional mechanism if you built an airport to get a road to it because you were not allowed under the law to build a road to an airport. Now don't ask me why. I have no particular reason to talk about our old prejudices. We had to change the minds set of the Congress of the United States. The assumption was that you go to the Congress and somebody says that we're going to watch out for boon-doggling and we have to look out for somebody getting funding for some project that isn't worthwhile. That's not the way it works. It does not work that way and it's not going to work that way whether I'm there or somebody else is there.

So we recognized that we had to provide a mechanism with imagination

where you can do precisely what you're doing now. You are interpreting what we meant, but don't lose the broad theme as to the why of it, not just what does it mean. The why of it is it's the economic policy and direction for the country, a major policy change, recognizing that the transportation system in moving goods from point A to point B is an enormous cost. If you land a ship here in Elizabeth and you load the trucks that are in line to take the goods from that port and that ship and that container is overweight, too bad. You either take the container and run the risk of the fines and taxes you are going to pay on the turnpike, or you'd get out of line and maybe out of business.

Now shouldn't there be international standards that are established for the packaging and moving of materials, because, in order to be Intermodal, you are going to eventually move materials on trucks. They have to fit on trucks, they have to fit on ships, and they have to fit on airplanes, so therefore, it's ludicrous for us not to have some kind of standards and policies for that. That's part of what ISTEIA is talking about. So, intermodality is very simple. It is not complicated. Don't let bureaucracy make it complicated, keep it loose. It was meant to be loose. It was meant to be applied. Our goal was to develop a national Intermodal transportation system that moves people and goods in an energy efficient manner. Why an energy efficient manner? So we can be competitive in the global market place. Energy efficient because we recognize that 66% of imported oil goes to transportation. A single penny, a gallon difference, or a dollar difference on a barrel of fuel or a barrel of crude oil coming from the Middle East can totally change your competitiveness and efficiency.

This blueprint for the nation's future economic restoration must confront head on the enormous challenges of the global economy, our declining productivity growth, energy viability and air pollution. I don't want to overlook that in the need to build America's infrastructure. The American infrastructure can never be referred to as a boon-doggle or a waste of the taxpayers money. We know that every dollar and penny that is spent on the improvements, whether it's spent on reservoirs and dams or harbors or highways or transportation programs, provide a return of at least 20 fold.

If our forefathers didn't build the tunnels and the bridges and so forth, the country would not operate. It is that simple. Just take the George Washington Bridge. We built that for around 143 million dollars and it was a very limited cost when we built the George Washington Bridge. If you tried, you couldn't build the George Washington Bridge today because you'd never get passed an environmental impact statement. We have paid for that George Washington Bridge ten times over, which is wonderful. So, did it create an opportunity? How about those people out in the midwest where we have all the flooding? Billions of dollars of damage. The President speaks of two and a half billion dollars, but it will probably be 10 to 15 billion dollars at least, without counting the direct impact upon the hundreds of thousands of citizens there because they didn't want to build the flood structures they need. They didn't want to improve and put the dikes up. So, where did we gain?

Members of Congress refuse to put the proper funding into infrastructure fundamentally because that's boon-dogging or we must spend it for our

health care program. Nobody is opposed to the health care program, but unless you provide this to build that infrastructure system which creates the new wealth that is needed to run this nation with hundreds of millions of people, we will not be able to move ahead.

The ISTEA bill has as its very foundation the Clean Air Act. We meant it to be that way. If you're doing anything with transportation, particularly in the Northeast or California, don't make any plans, don't make any grandiose ideas until you understand the Clean Air Act. First, because the Clean Air Act comes back and says the following: you will have to reduce the air pollution in the northern part of New Jersey, particularly since, of the 21 counties, 19 are considered at the level of Los Angeles as far as air pollutants are concerned. Clean Air comes back and says that if you do not do that, you will lose your transportation money or it will be set aside.

Those of us who live in New Jersey have to look to New York because the Clean Air Act says something else. Not only do you have an MPO in the Northern part of the state of New Jersey with the 14 counties involved, but you must also have a compatible plan with New York City regionally. That is the law. So, if you're going to build anything or you're going to plan any capital projects, the first and foremost issue that must be considered is how does it fit in with the Clean Air Act and how does it work?

ISTEA has given enormous authority to the members of the MPO's who decide where the funding will be expended that's been allocated to them through the funding that comes from the Federal Government for transportation. It's got to meet the

fundamental test that the capital investments and improvements that you're making are reducing the air pollution. Therefore, the Clean Air Act becomes the fundamental basic act to determine how we will move capital improvement in transportation systems. There's another element involved, that is, the enormous flexibility which was terribly difficult to win politically. We came back and said in the House and on the floor and in the conference, why should New Jersey be telling New York what to do with their transportation money? Why should Montana be telling California? Why should there not be a flexibility allowing the states to make the fundamental decisions they have to make? That's a point you're making today: they are in the best position to know what to do to be able to meet their needs.

The legislation provides that the state basically can come back and the Governor can make a decision if the need is greater in this particular area or that particular area or there is a project that is to be completed because it is critically important. Then he can transfer those funds from point A to point B. In fact, he can probably transfer 95% of the funding allocated to the State in all particular directions to that particular project to get it done.

So, if I'm to have any value to you here this morning then you have to say to yourself, can we move ahead and can we get it done? Yes! Is it there? Is the decision process there? Yes! Do we need 17,000 new regulations? No! It shouldn't take 10 or 15 years to put this in motion. Go and start it out. Intermodalism is not complicated! We're simply saying when you're planning your transportation system put them together and make

them work so it makes sense — if you're going to improve Newark Airport, you have to get people there! Therefore, you can't absolve yourself from the accessibility issues.

I think that Rich Roberts, Port Authority, said that "Roe dreams his ambitions." I guess when you serve a lifetime and you're really into something, the people give us that opportunity to learn. That information has got to be shared and used. This can be done. It should not take 10 years to pass regulations to determine what they meant.

We're talking about economics, we're talking about efficiencies, we're talking about making America No. 1, as I see it, as far as our international issue is concerned. Also, don't leave out one other terribly important phase, the IVHS issue.

If you're going to build something, build it right. I heard on the news the other day that now you can go through turnstiles here and you don't have to stop, you go right through. Everybody's applauding. Isn't that exciting? In northern New Jersey, do we have to have people backed up in every town and every community simply because we're waiting to get through a toll booth? That's old hat. That's old technology. We can go ahead and improve that technology right now.

You're going to find in your lifetime that as this bill is understood and as this bill unfolds, it does not limit your horizon to a piece of concrete or another cab or another car on the transit system. Look at transportation as a system, look at it as the economic dynamics of the country - the rebuilding of America, the future of the country. I really believe that the success of this measure will depend on your decisions.

VIII. IMPLEMENTING AN INTERMODAL MANAGEMENT SYSTEM (IMS)



Intermodal rail terminals serve as the land-sea link to move international marine cargo to and from inland markets.

**By Dane Ismart,
Intermodal Branch, FHWA**

The key to successfully implementing an intermodal management system is simplification. Data requirements and evaluation techniques of intermodal transportation strategies and actions must be kept simple because of limited State planning resources. An even more limiting factor is the non-existence or lack of access of detailed intermodal data as well as technical planning procedures for evaluating traffic between limited modes. Attempts to establish a sophisticated data intensive intermodal management system may lead to failure.

Therefore, to overcome these limitations, State and local planning agencies must use existing data resources to develop an intermodal management system that is issue oriented. Intermodal planning issues would address the movement of both people and goods by all modes or combination of modes. Issues would include not only physical constraints but legal, regulatory, and financial limitations to efficient intermodal transportation.

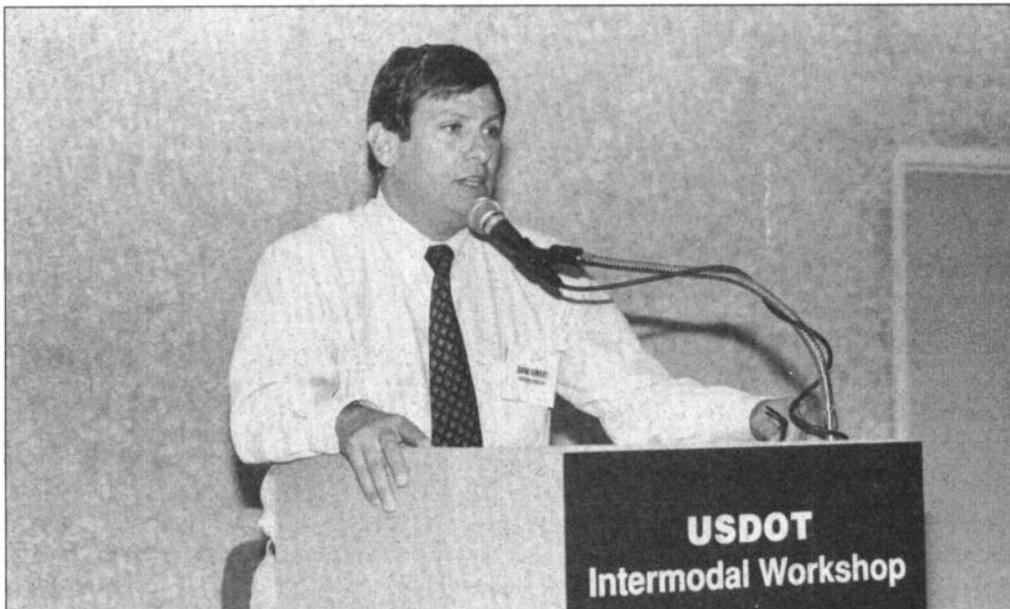
A typical list of basic categories for developing intermodal planning and management system issues by a State or local planning agency are:

- a. **Physical limitations to intermodal movement.**
- b. **Accessibility of intermodal facilities.**
- c. **Transferability and coordination between modes.**
- d. **Legal and regulatory constraints to intermodal transportation.**
- e. **Delivery and collection systems for intermodal facilities.**
- f. **Safety of intermodal facilities and systems.**
- g. **Economic and environmental tradeoffs between modes.**

The successful intermodal management system will address each of these issues by establishing performance measures and standards for evaluating the operation of intermodal transportation systems. Not only would the performance measures and standards be used to evaluate the current operations

of intermodal facilities, but would be the cornerstone for determining how various transportation strategies and investments would impact the movement of people and goods as part of an overall transportation system.

For an intermodal management system to be implementable, the performance measures must be based on data that is available or easily accessible by the State and local planning agencies. There are literally hundreds of performance measures that could be used as part of an intermodal management system. The proposed system presented in this technical guidance represents a basic structure that could be implemented by most States with a reasonable amount of effort. Since intermodal planning involves both people and goods, the proposed performance measures and standards listed below consist of two components: freight and passengers.



Dane Ismart, FHWA briefed participants on the federal guidance which will assist state and local officials develop and implement an effective Intermodal Management System (IMS).

PERFORMANCE MEASURES AND STANDARDS – FREIGHT

CATEGORY/ISSUE	MEASURE	STANDARD	
A. PHYSICAL LIMITATIONS			
Doublestacking & Structural Vertical Railroad Electrification	21' 0" Clearance	No. Restrict.	A
		5% Rail Mile.	B
		10% Rail Mile.	C
Condition Of Pavmt. Struct. Access To Intermodal Facility	Remaining Design Life	30 years	A
		25 years	B
		20 years	C
		15 years	D
B. TERMINAL ACCESSIBILITY			
		TIME	
Seaport Airport Truck Terminal Rail Terminal	Travel Time From Terminal To Major Arterial Or Access Controlled Facility	5 Min.	A
		10 Min.	B
		15 Min.	C
		20 Min.	D
C. DELIVERY AND COLLECTION SYSTEMS			
		OFF STREET LOADING & UNL. CAPACITY	
Freight Delivery At Major Centers Of Activity	Unloading Dock Availability	Major Centers Of 100% =	A
		90% =	B
		80% =	C
Truck Delivery & Loading Interference With Street Traffic	Time For Delivery Or Loading	10 Min	A
		15 Min.	B
		20 Min.	C
		30 Min.	D
Off Peak Delivery Of Freight	Percent Delivered Off Peak	100%	A
		80%	B
		60%	C
		40%	D
D. TRANSFERABILITY & COORDINATION			
		TIME	
Freight Transfer Between Modes	Transfer Time Between Modes	Ship To Rail Ship To Truck Truck To Rail Rail To Rail Truck To Truck	Standards Based On Private Carrier Experience

CATEGORY/ISSUE	MEASURE	STANDARD	
D. TRANSFERABILITY & COORDINATION (CONTINUED)		TIME	
Interference Of Movement Between Modes For At Grade Crossings	Delay Time & Speed of modes	Rail Crossing	Rail Speed 50 = A
		Highway	40 = B
			30 = C
			20 = D
	Highway Delay Time At RR Crossings	Avg. Veh. Delay	
		3 Min.	A
		5 Min.	B
		7 Min.	C
	Highway Delay Time At Bridge Openings	Avg. Veh. Delay	
		3 Min.	A
		5 Min.	B
		7 Min.	C
Drayage Between Modes	Distance In Miles	0	A
		2	B
		4	C
		6	D

E. SAFETY

Railroad/Highway Safety Crossings	Accidents/Million Vehicles Exposed	Fatal/Injury Rate	
			Standard Based On State Rates

F. LEGAL OR REGULATORY

		PER SHIPMENT UNIT	
Customs and Processing	Time - Hrs. Administrative	0 - 1 Hr.	A
		1 - 2 Hr.	B
		2 - 4 Hr.	C
		4 - 8 Hr.	D
Railroad Freight Liability For Passenger Railroad Usage	Degree Of Liability	No Liability	A
		Limited	C
		Full	E

PERFORMANCE MEASURES AND STANDARDS – PASSENGERS

CATEGORY/ISSUE	MEASURE	STANDARD	
A. PHYSICAL LIMITATIONS		V/C RATIO	
Park & Ride Lots (Intermodal Terminals)	Volume To		
	Capacity	>1.0	F
	Ratio Of	1.0	E
	Parking	.95	D
	Spaces During Peak Periods	.92	C
Pavement Structure Access To Passenger Terminals	(See Freight Measures)		
Pedestrian Access	Capacity And Level Of Service As Defined In The Highway Capacity Manual		
		Urban Areas	
Pedestrian Limitations At Major Generators	Pedestrian X-ing Per Mile of Major Arterials & Limited Access Facilities	A = 1/8 Mile	
		B = 1/4 Mile	
		C = 1/2 Mile	
		D = 3/4 Mile	
B. TERMINAL ACCESSIBILITY		TIME	
Access To & From Major Intermodal Passenger Terminals (Air, Sea, Rail, Bus) And Major Population And Business Centers	Travel Time		
	Between Terminal	10 Min.	A
	And Major	20 Min.	B
	Activity Centers	30 Min.	C
	Or	40 Min.	D
	Percent of Market	Percent	
	within 45 Minutes	100	A
		90	B
	80	C	
	70	D	

CATEGORY/ISSUE	MEASURE	STANDARD	
C. DELIVERY AND COLLECTION ACCESS			
Passenger Feeder System To Intermodal Facility	Number Of Modal Choices	Mode Altern.	
		5	= A
		4	= B
		3	= C
		2	= D
	1	= E	

D. TRANSFERABILITY & COORDINATION			
Passenger Transfer Between Modes	Transfer Time Between Modes	Time	
		2 Min.	A
		5 Min.	B
		8 Min.	C
		11 Min.	D
Highway - Ferry Boat Coordination	Queuing Time	Avg Veh Wait	
		10 Min.	A
		15 Min.	B
		20 Min.	C
		30 Min.	D
		45 Min.	E

E. SAFETY			
Railroad/Highway Safety Crossing	See Freight Performance Measures		
Pedestrian Crossing	Accidents/Million Crossings	Fatality/ Injury Rate Standard Based On State Rates	
Bicycle Crossings/ Joint Usage	Accidents/ 100,000 Bicyc.	Fatality/ Injury Rate	

F. LEGAL AND REGULATORY

Refer To Freight Performance Measures

The performance measures and standards as presented in this paper outline a basic approach for evaluating intermodal strategies and actions. However, it is expected that a State or local planning agency will expand or modify the performance measures in accordance with their transportation needs. Standards for the performance measures will also vary by area. For example, New York planning agencies will need different performance measures and standards for the movement of containers from the ports than West Virginia in the movement of coal.

Hopefully, the performance measures in the technical intermodal guidelines are broad enough to evaluate the transportation strategies, actions, and policies of State and local transportation agencies. Where new or unique intermodal strategies or actions are proposed, modifications to the performance measures will have to be made.

Although performance measures and standards play an important part in an intermodal management system, there are issues which must be addressed as part of a comprehensive transportation planning process. Issues such as determining the economic or environmental tradeoffs between modes when applying different strategies and actions must be determined as part of a comprehensive planning process. Examples of strategies and policies that would require a planning analysis include legalization of triple trailers, weight restriction changes and energy tax policies. Projects and transportation

actions such as these examples will cause economic changes resulting in mode shifts of passengers and freight.

Methods for evaluating impacts as part of the comprehensive transportation planning process would include the traditional travel demand modelling process, diversion curves, trend analysis, and economic forecasting procedures.

In summary, identification of intermodal transportation issues will be the key in developing an implementable intermodal management system. After the issues have been identified, the development of performance measures and standards will provide the framework for an intermodal management system. Finally, the transportation planning process will take the results of the intermodal management system as well as the other management systems and determine the economic and environmental tradeoffs of the intermodal transportation strategies, actions, and policies.

STATE DOT AND MPO INTERMODAL PLANNING ISSUES

I. Physical Limitations

- A. Structural vertical clearance for doublestacking and railroad electrification.
- B. Structural integrity and remaining pavement life of highway access to intermodal facilities.
- C. Bridge weight restrictions.
- D. Horizontal radii limiting truck movements to intermodal facilities.
- E. Limited pedestrian crossings of major arterials and limited access facilities.

II. Accessibility

- A. Accessibility time and cost to intermodal facilities.
- B. Accessibility to bike and trail facilities.
- C. Designated truck routes.

III. Transferability and Coordination

- A. Movement interference between modes at highway-railroad crossings.
- B. Movement interference between modes at highway-waterway crossings.
- C. Congestion and delays created by drayage.
- D. Passenger transfer delays between modes.
- E. Highway-ferry boat transfer delays.

IV. Delivery and Collection

- A. Passenger feeder systems to intermodal facilities.
- B. Land-side access to airports and harbors.
- C. Freight delivery at major centers of activity.
- D. Truck delivery and loading interference with street traffic.
- E. Peak and off-peak delivery of freight.
- E. Availability of park & ride lots.

V. Safety

- A. Highway-Railroad crossing safety.
- B. Bicycle & Pedestrian Safety.
- C. Hazardous materials shipment.

VI. Legal & Regulatory

- A. User fees and subsidization of transportation modes.
- B. Truck weight limitations.
- C. Liability of freight rail lines for transit usage.
- D. Truck route restrictions.
- E. State multimodal trust funds & funds eligibility.

VII. Economics & Environmental

- A. Economic tradeoffs between modes and combinations of modes.
- B. Air, noise, and wetland impacts of intermodal facilities.
- C. Economic impact of railroad abandonment.

INTERMODAL TERMINAL DATA

Size of Facility

- > Annual tonnage and/or volume by mode

Rail Access

- > Vertical clearance (can/cannot handle double-stack)
- > Maximum safe speed
- > Number of grade crossings by average daily traffic on highway
- > Track (single/double)
- > Rail car volumes (annual average)

Freeway Access for Trucks

- > Over-the-road distance from facility to freeway

- Average travel time during peak period
- Average travel time during periods of little or no congestion
- Restrictions on use by trucks with long trailers or semitrailers
- Characterization of land uses along route (predominately residential, commercial, industrial, undeveloped, etc.)
- Truck volumes to and from facility (annual average)

Truck Loading and Unloading

- Number of docks
- Percent of docks in use during peak periods
- Average daily truck arrivals and departures divided by peak hour arrivals and departures (a turn-over rate which measures the extent to which demand is spread over the day)

Ship and Rail Loading & Unloading

- Analogous to truck loading and unloading

Transfers Between Modes

- Time required (peak and off-peak)
- Drayage distance in miles

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